Question_23_notebook

April 26, 2021

0.1 Alchemix Question 23: Relationship between ALCX and FEI users?

Authors: dtradke, monetcapital, ryanl

Date: 4/26/21

This notebook addresses question #23 on the site https://www.notion.so/Analytics-Bounties-for-Alchemix-ffd6c25bdef3486c9b8dfa9476ac6a39. The question is aimed at understanding ALCX users who participated in FEI's Token Genesis Event, specifically their combined value in FEI, and their staking/farming patterns with ALCX and FEI/TRIBE.

First, we need to import the Python libraries used for our data analysis.

```
[1]: # import libraries
     import re, datetime, time, csv
     import matplotlib.pyplot as plt
     import pandas as pd
     import urllib.request as rq
     import numpy as np
     import json
     import os
```

Now we import the backend code used to load, format, and process the data in our analysis from a file called "util.py".

```
[2]: # import backend code for processing
     import util
```

We will now import the Flipside Crypto data which corresponds with current ALCX users and their value of FEI/Tribe in USD.

```
[3]: # load/format value of current users with FEI and Tribe value in USD
     url = 'https://api.flipsidecrypto.com/api/v2/queries/
      ↪9b0a847f-a4dd-4d21-a3d3-f57d64b07090/data/latest'
     fei_tribe = util.loadData(url)
     fei_tribe_val = util.formatFEITribeVal(fei_tribe)
```

Next, we import more Flipside Crypto data which corresponds with all of the attendees of the FEI Genesis Event.

```
[4]:  # get Genesis event attendees
      url = 'https://api.flipsidecrypto.com/api/v2/queries/
       ↪7c26c1cd-f59f-40b0-892d-f0d229052df3/data/latest'
      genesis_event_users = util.loadData(url)
```

The last data import we do from the Flipside Crypto dataset is a list of the current ALCX holders
and their portfolio composition which we will use for our analysis. We also format the the data to
compose a dictionary to help track addresses.

```
[5]:  # get alcx holders
      url = 'https://api.flipsidecrypto.com/api/v2/queries/
       ↪ddf70c0d-d6e2-41a1-a014-6f33e84fab72/data/latest'
      alcx_holders = util.loadData(url)
      alcx_holders = util.formatHolders(alcx_holders)
```

Finally, we calculate the amount of ALCX in each portfolio, and the amount of ALCX and
FEI/Tribe that is staked to support our analysis of how these users at the Genesis Event use
and stake their currencies.

```
[6]:  # get alcx holders who attended event
      alcx_genesis_event = util.alcxHoldersAtEvent(genesis_event_users, alcx_holders,␣
       ↪fei_tribe_val)
```

0.1.1 Question 1: How many users attended the FEI Genesis Event?

The first question we address is about the volume of people who attended the Genesis Event.
In doing so, we record the shape of our 'alcx_genesis_event' Pandas dataframe, where one row
represents a user at the event. We find that there were a total of 112 users who received FEI/Tribe
by attending the Genesis Event.

```
[7]:  print("Number of Alchemix users who participated in FEI's Token Genesis Event: ␣
       ↪", alcx_genesis_event.shape[0])
```

```
Number of Alchemix users who participated in FEI's Token Genesis Event:   112
```

0.1.2 Question 2: What is the total combined value of their position in ALCX?

To answer this question, we sum the row of our dataframe which pertains to each user's value in
ALCX. We found that their total combined value in ALCX is almost \$470,000 USD, shown below.
We also show the distirbution of the ALCX value among the entire population in the bar graph
below, where a single user has over \$160,000 USD in ALCX, although the population mean of
\$4,195.40 USD is extremely skewed because of the remaining portion of users having low amounts
of ALCX.

```
[12]:  print("Total combined value of their position in ALCX: ", np.sum(np.
       ↪array(alcx_genesis_event['ALCX'])))
```

```
Total combined value of their position in ALCX:  469879.711178427
```

```
[13]: # Amount of ALCX for users who participated in FEI's Token Genesis Event
      util.barGraphDist(alcx_genesis_event, 'ALCX','ALCX Value (USD)', 'Genesis Event␣
       ↪Attendees Value in of ALCX')
```
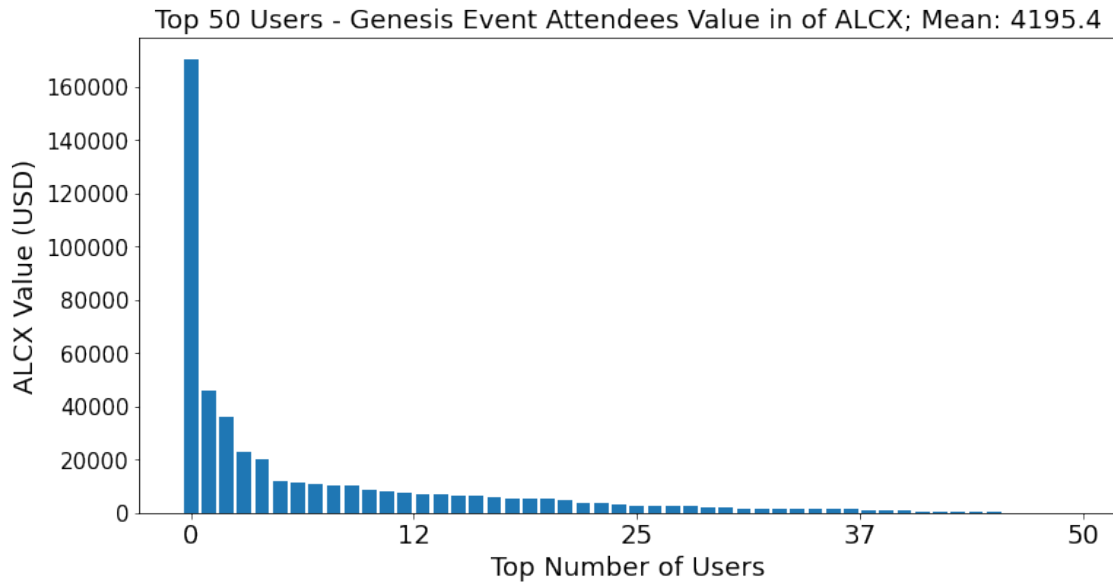


### 0.1.3 Question 3: Are these users staking ALCX and FEI/TRIBE the same? Different?

To answer this question, we compare how the 112 users who attended the FEI Genesis Event use their portfolio with staking ALCX and FEI/TRIBE in the farming pools. Below, we show the mean value staked by these users in ALCX, valued in USD along the y-axis. The x-axis shows the top 50 users according to staked ALCX, and each bar pertains to one user. We find that the amount skated of ALCX is still skewed by the large amount of holders not staking, or staking little, and that the asymptotic decline follows a type of exponential decline.
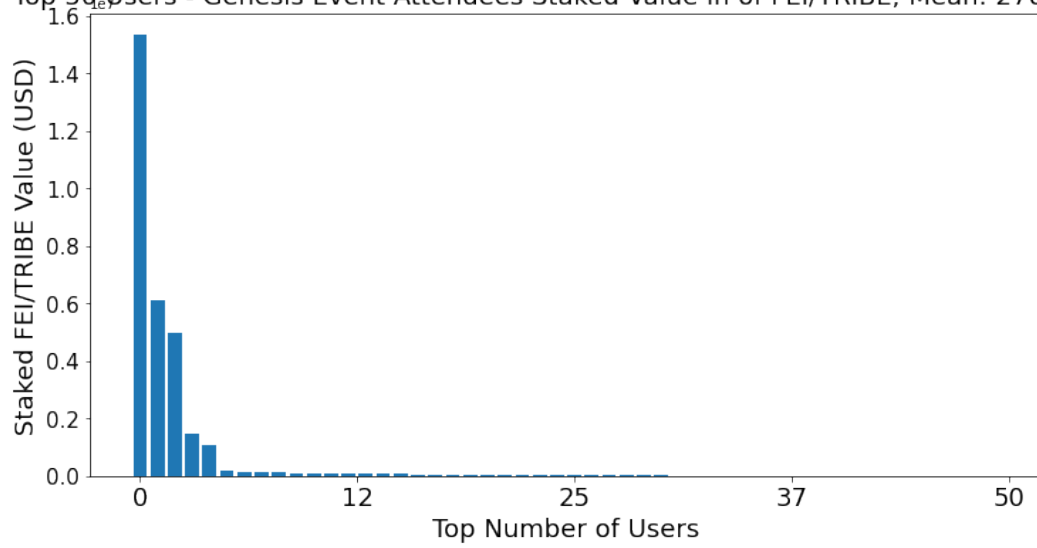
```
[14]: # Amount of ALCX staked for users who participated in FEI's Token Genesis Event
      util.barGraphDist(alcx_genesis_event, 'STAKED_ALCX','Staked ALCX Value (USD)',␣
       ↪'Genesis Event Attendees Staked Value in of ALCX')
```

Top 50 Users - Genesis Event Attendees Staked Value in of ALCX; Mean: 90903.9
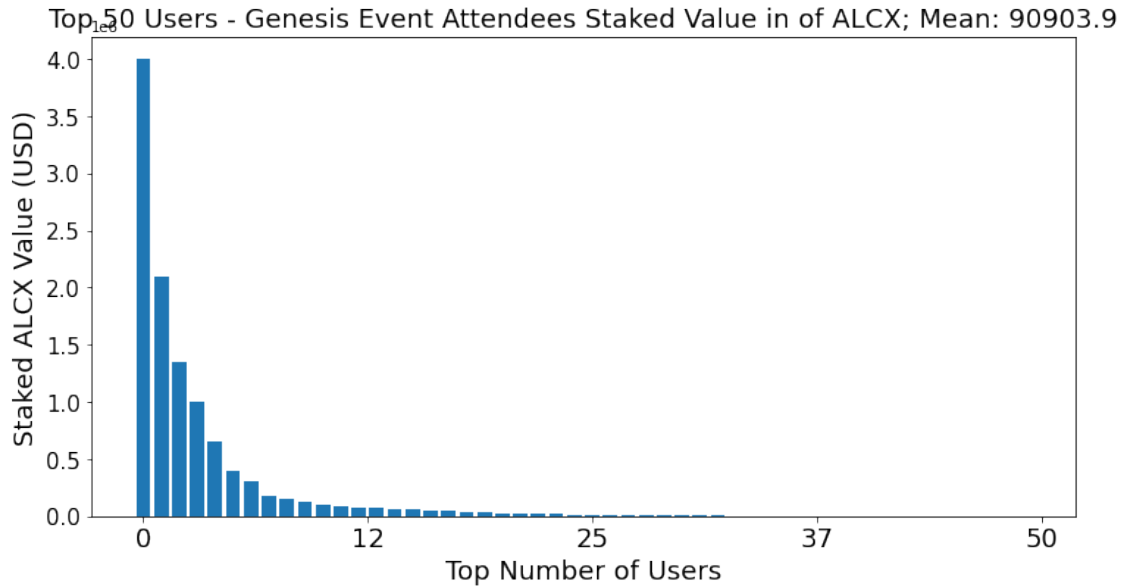
Next, we plot the top 50 users who staked FEI/TRIBE and calculate the mean value in USD. While the previous plot showed an exponential decline in users who have skated ALCX, the plot showing the amount of FEI/TRIBE staked suggests this pattern does not follow an exponential decline and is instead heavily weighted towards just the top 5 stakers of FEI/TRIBE. This pattern suggests only a handful of users are staking FEI/TRIBE, and that this distribution is incredibly unbalanced. A result of this is the mean value of FEI/TRIBE being staked being skewed to the higher side of over \$276,000.

[17]:
```python
# Amount of FEI/TRIBE staked for users who participated in FEI's Token Genesis
↪Event
util.barGraphDist(alcx_genesis_event, 'STAKED_FEITRIBE','Staked FEI/TRIBE Value
↪(USD)', 'Genesis Event Attendees Staked Value in of FEI/TRIBE')
```

Top 50 Users - Genesis Event Attendees Staked Value in of FEI/TRIBE; Mean: 276439.9

[ ]: