

Chapter 8: Mathematical Emission Model

The purpose of this document is to define the formula for emission distribution to the users and determine extinguishing of emission in case of currency rate drop.

Emission distribution to the users

Setting the objective:

- Emission should be distributed so that new users receive less money at each progressive step than at previous ones.
- Vico coins are emitted (total on pre-ICO and ICO), total volume of emission preliminarily is 5 Vico.
- First man should receive some amount of X coins; other ones would receive coins in decreasing order.
- Total emission is carried out when $Q_{\max}$ (for example 100,000,000 people) is achieved.
- Average number of coins received by users should be equal to 500 coins.
- Total amount of issued coins after first emission of coins should make 4X.
- Emission per one person is carried out not at once, but in accordance with a “scoring function” which includes activity type set: installation of mobile application, passing through bio identification, friend connection, making a transaction during each connection.

Decrease of the number of coins will be carried out with the coefficient

$$C = 1.72 - 0.28 Q/Q_{\max},$$

where $Q_{\max}$ is maximum number of users

Q is current number of users

Each user will receive average number of coins for all users multiplied by C coefficient:

$C \times (5 \times \text{Vico}/Q_{\max})$, where Vico is number of coins issued on ICO.

According to the condition about the average number of coins:

$$5 \times \text{Vico}/Q_{\max} = 500,$$

as a result: $Q_{\max} = \text{Vico}/100$.

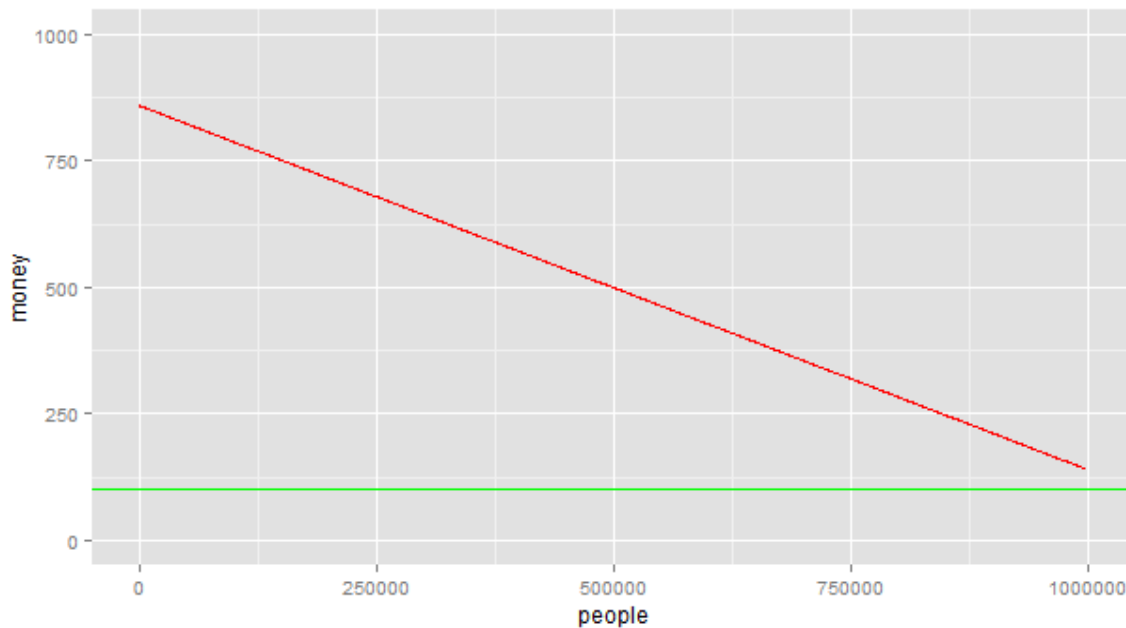
So, the number of system users for whom emission will be carried out depends on the number of issued coins on pre-ICO and ICO in accordance with the smart contract. Tokens will be issued by the smart contract upon request.

First person will receive $X = 1.72 \times 500 = 860$ coins.

Last person will receive $0.28 \times 500 = 140$ coins.

Let's assume that 100 billion coins were issued initially, then $Q_{\max} = 100,000,000$ coins.

Let's consider emission distribution to people in this case:



Red line represents the number of coins for one person.

Green line represents minimum received by the user in passing through bio identification and execution of elementary functions, the rest depend on passing through stages in the scoring model.

All funds will be submitted to the user only in passing through certain points described in “scoring function”.

Emission smoothing at price drop

Price is considered as dropping if $P < \text{Avg}(\text{Month})$, where P is price, $\text{Avg}(\text{Month})$ is average prices for the last month.

If price is falling down, emission of additional coins is postponed for the future until the price stops falling down. It is defined by the “scoring function”. Maximum emission volume for one person is not changed and is set up at the moment of passing through bio identification.

Description of “scoring function”

So, we defined that large emission volume has been initially provided by the system for those who connect earlier, but it would be fair to issue this sum stepwise with the purpose of a payment system capitalization increase. Otherwise quick money emission puts pressure on the exchange rate. Therefore, the scoring function should contain parameters that on the one side will clearly sift out robot actions and on the other side improve capitalization. After defining it is necessary to transfer this function control to artificial-intelligence technologies (neural networks, deep learning) with the task to achieve maximum network growth and increase exchange rate value.

Here is an example of this approach in static condition:

- mobile application installation – one coin – payment is done once
- passing through bio identification – 15 coins - payment is done once
- friend connection passed through bio identification -10 coins payment is done every time
- execution of transactions within the first month – 5 coins – once
- execution of transactions within the second month – 10 coins – once
- execution of transactions within the third month – 15 coins – once
- exchange via teller network – 5 coins – two times
- balance refill via teller network – 10 coins – two times
- proof of excellence — execution of payable simple task from one of the startups based on this platform — 10 coins — once (for example, Facebook can buy coins and propose to register for some coins via our application; Google can offer payment for taking photo shots of everything around your environment with landmarks for Google maps, etc.)
- other types of activities.

This emission is multiplied by the current exchange rate coefficient. The smart-contract parses the current exchange rate from public source and defines the average price from tree-leading stock exchanges.

The main objective of coefficient availability is to connect the cost of individual emission to the price of the cheapest smartphone able to perform mobile wallet functions and fitted with front-facing camera (the price of the cheapest smartphone falls down every year and is now about \$10-20). Thus, after purchase our future user can cover his expenses within several weeks by executing simple actions.