

1. Agents N .

We should choose the following parameters

- δ - maximum amount of money which can spend the agent;
- $\alpha \in \mathbb{R}$ - the *step* of the strategy (width of the relay);
- $\alpha_0 \in (-\alpha, \alpha)$ - the *middle layer* of the strategy;
- $n \in \mathbb{N}_0$ - number of layers above middle layer;
- $L = L(\delta)$ - number of real agents with this strategy.

First we should choose δ . We fix $\delta_0 > 0$, $\hat{\delta} > 0$, $k \in \mathbb{N}$ and consider δ_0 , $\delta_1 = \delta_0 + \hat{\delta}$, ... $\delta_k = \delta_0 + k\hat{\delta}$. So, we just consider finite sequence of δ_i with fixed step. For each δ_i we should find $L(\delta_i)$. For this purpose we need so-called gamma distribution (please find in wikipedia). We take one with $k = 5, \theta = 4$, multiply it by 10 (of course we can play with these numbers). We set $L(\delta_i) = 10f_{(5,4)}(\delta_i)$ (rounded to an integer).

Each real agent with strategy corresponding to parameters α, α_0, n is represented by $2n$ relays with thresholds $(\alpha_0 - n\alpha, \alpha_0 - (n-1)\alpha)$, $(\alpha_0 - (n-1)\alpha, \alpha_0 - (n-2)\alpha)$, ... , $(\alpha_0 + (n-1)\alpha, \alpha_0 + n\alpha)$ (at these layers agent buy/sell his stock). At the beginning agent have n stocks if $\alpha_0 \geq 0$ and $n-1$ otherwise.

We choose α also using gamma distribution. Take one with $k = 2, \theta = 2$. α we choose using the uniform distribution between $-\alpha$ and α . n we find as a root of the equation $\delta = \frac{e^{-\alpha}(1-e^{-\alpha n})}{1-e^{-\alpha}}$.

2. D agents.

We should choose parameter β (when price rise/drop β points we buy/sell) and decide whether agent have stock at the very beginning. We consider sequence β_i with fixed step. We also fix gamma distribution with some parameters and multiply it by number B . We want to give the same amount of stocks for N and D , so B we can found from the equation $\Sigma_{\alpha, \delta} n(\alpha, \delta) L(\delta) = \Sigma D_1(\beta_i) = B \Sigma_i \Gamma(\beta_i)$ where $D_1(\beta_i)$ is number of D agent corresponded to β_i with stock at the very beginning. We also assume that $D_0(\beta_i) = D_1(\beta_i)$ where $D_0(\beta_i)$ is number of D agent corresponded to β_i without stock at the very beginning.