STAKING STARTUP-PACK: How to Stake your $ADA Facts & Expectations

1. **Choose your pool.**

   a. There are many factors to consider when choosing a pool. Here are some to consider:

      i. **Pool operator experience**

      ii. **Pool operation infrastructure, i.e. running on bare metal and/or with a cloud provider**

      iii. **Is pool operator available for questions & concerns, i.e. Twitter/Telegram**

      iv. **Is the pool's variable fee too low or too high (see section 3c for detailed explanation)**

      v. **Does the pool have a pledge (section 3a for detailed explanation)**

      vi. **Is the pool mission driven, i.e., donating profits to charities you want to support**

      vii. **Is the pool saturated (section 4 for details)**

   b. Any of these sites provide information about the blockchain, pool listings and pool performance metrics.

      i. **https://PoolTool.io**

ii. https://adapools.org

iii. https://cardanoscan.io

iv. https://pool.pm

2. **Goto pool website:** **i.e.,** https://growpools.io

3. **Notice Pledge, Fee, ROS**
   a. Pledge: is pool operator's skin in the game, commitment. Those funds cannot be moved/spent/withdrawn without retiring the pool or changing the registered pledge amount. If a pledge is not met by the operator, the pool earns no rewards. Pledge also helps secure the network against attacks.

   b. Fee#1: Fixed fee = 340ADA. This fee is the minimum a pool is allowed to charge and what the network pays the pool operator for making blocks. It is taken from the total rewards earned by the pool one time per epoch (reward cycle/5days), ONLY IF a block is made, and only for the first block.

   c. Fee#2: This is the variable fee, or tax, a pool operator is allowed to charge for their operational expenses. This can vary from 0% to 100%. 0% means that the pool operator will only see the minimum 340 per epoch for their own rewards plus rewards for their pledge. For pools with less than 2% variable fee, unless this pool has a grant, some sort of special financial backing, a very large pledge, are running multiple pools with high stake or are running a temporary low fee promotion, they may not be sustainable and should be approached with caution.

i. NOTE: Some smaller pools have lowered their fee to 0% until decentralization parameter "d" reaches 0, which is expected to happen in March 2021. At that time, community pools will be making 100% of the blocks. Until then, a 0% fee provides delegators with more rewards while the pool attracts more stake.

ii. 100% fee is a private pool that only earns rewards for the pool operator.

Variable fee may change over time depending on conditions of the network and operational expenses for the pool. A good pool will communicate changes via their website or communication channels such as Telegram/Twitter, etc. These changes take 2 epochs to take effect to protect delegators who don't agree.

d. ROS: Return on Stake, also known as ROI. This is annualized calculation. This means that over a 12 month period you can expect ~5% ROS on average for your delegation. This is because the protocol functions as a lottery. The more stake a pool has the higher the probability they will make blocks (assuming their pool is properly setup). Rewards are calculated as a proportion of total active stake to expected blocks based on probability. If the pool exceeds that probability, the ROS also goes up.

4. **Pool Saturation:** A pool is saturated when its "active stake" is greater than the Total Active Stake divided by the number of desired pools, expressed as: Ps > Ts/k

i. Currently, saturation is 64M. Use any of the websites above to see if your desired pool's

"active stake" is above this amount. In March 2021, when number of pools desired by the protocol (k) reaches 1000, saturation level will drop to 32M.

ii. When a pool is saturated, its rewards are capped, and the ROS goes down. For the highest ROS, seek pools that are not close to their saturation points and have room to grow for long term delegation without having to move.

iii. Ps = a pool's "active stake". This can be found on any of the websites listed above.

iv. Ts = Total Active Stake. This can be found on any of the websites listed above. It is currently 32B.

v. k = number of desired pools for healthy network. Currently 500, this value will increase over time as the network matures and stabilizes. As "k" increases, the saturation point decreases, encouraging Ts to spread out over greater number of pools.

vi. Keep an eye on saturation, as a delegator, your also an important part of overall network health. Keep your stake with a pool that has room to grow to promote decentralization and avoid losing rewards.

5. **Make your delegation.** You can delegate using Yoroi wallet or Daedalus wallet
   a. **Daedalus:**
      https://daedaluswallet.io/en/download
      i. Automatic updates will keep the wallet running stable with latest features.
      ii. When first opening the application, it make take and hour or more to sync to the blockchain. After this initial sync, the wallets will open much faster.

iii. Create a new wallet, SECURELY save your mnemonic key. This can be used later to restore this wallet in case of loss or to newer versions.
iv. Transfer funds from your crypto exchange to the RECEIVE address of your wallet.
v. Delegate using Stake Pools tab.
vi. Rewards and information about delegation can be found in the delegation center of the wallet.

b. **Yoroi: https://yoroi-wallet.com**
i. Choose "Chrome" under Downloads.
ii. Create a new wallet, SECURELY save your 15-word mnemonic key.
iii. Transfer funds from your crypto exchange to the RECEIVE address of your wallet.
iv. Pool selection is now available in the delegation tab.
v. The Dashboard tab will tell you how much you have delegated to the pool, when to expect your rewards and how much rewards you have.

6. **Delegation facts.**
a. There is no cost for keeping your wallet delegated to a pool. There is only a one-time per delegation fee of 2.17 ADA.

b. You are free to move/spend/withdraw your delegation at any time.

c. If a pool gets hacked, there is no risk to your ADA. The delegation sits on the blockchain as a transaction stored inside of an immutable highly secure ledger, not in the pool.

d. Rewards are distributed on the FIFTH epoch after your first delegation, including the current epoch. For example, your delegation is made Epoch 240, your rewards come on 244. After that, rewards come every epoch.

e. If you move your delegation, you don't have to wait epochs to receive rewards again. You remain delegated to your existing pool until the switch occurs. So you should have a steady stream of rewards as long as the pool you're coming from and the pool you're moving to are making blocks.

f. At the present time, a wallet can only delegate to one pool. In the near future, Daedalus/Yoroi wallets will support one wallet to many pools delegation. If you wish to delegate to more than one pool, create a wallet for each and transfer funds accordingly.

g. Your delegation is not only an opportunity to grow your ADA. It is also a direct, material participation in the fundamental mechanics of the Cardano blockchain project. It is a voice in a large community supporting a vision that is part of a global solution to wealth distribution, to efficient and sustainable commerce, and to a future defined by our efforts towards the common good. Your delegation is a revolution, it is part of a new global financial system that will power economies that strengthen humanity. These visions will take years to realize. In that time, you will enjoy a healthy annualized ROS and take comfort in knowing you are part of making history the next seven generations will stand on.

h. Best time to move a delegation from one pool to another is just before the end of the current epoch. This ensures that you have the most time to make the best choice while also making sure that your new delegation is registered before the next snapshot, saving you an epoch of time before seeing rewards.

7. Reward facts.

a. Rewards are automatically delegated for you, no need to redelegate the wallet.

b. Rewards are distributed at the beginning of each epoch.

c. Between now and March of 2021, the number of blocks made by stake pools will increase per epoch. This means more pools will have an opportunity to make blocks.

d. Rewards are based on two things: the probability of a pool being elected to make blocks according to the parameters of the protocol lottery, and the ability of the pool to make those blocks. The probability of a pool making blocks is directly proportional to how much of the circulating ADA is staked to the pool. The higher the active stake, the higher the probability of making blocks. The ability of the pool to make those blocks determines the pools performance and hence your rewards.

e. Over time, the protocol of this blockchain is designed to make sure that pools that perform well provide annualized ROS of ~5% average. This is not average over 5 days, 30 days, this is average over 12 months.

f. Rewards from pools that are saturated are capped, and ROS goes down. This is by design, to discourage any one pool from holding too much stake and disturbing the performance and stability that comes from Total Active Stake (Ts) distributed more evenly across the desired number of pools (k).

g. If you don't see rewards right away, you may want to consider staying with your pool for a time that allows the law of probability to meet the pool's factor of performance. If you chose your pool strictly because you thought they were guaranteed to bring you rewards, there is no guarantee. Your delegation is part of a project with a long-term vision. Your rewards will reflect the ability of the network to regulate itself and keep everyone happy. Pick a pool you believe in and want to support. Give them a chance to prove they can make blocks for you and keep your wallet GROWING!

8. Choosing your stake pool by category, i.e., charity, women in blockchain, African, Latino, community developers, etc:

   a. https://adafolio.com/ - Curated & Community Portfolios
   b. https://missiondrivenpools.org/ - Mission driven
   c. https://stakingforgood.com/ - Pools For Greater Good