



AXION

<https://axion.network>



Official Whitepaper

A Global Currency, Designed to Serve the People

A community built, full transparency, and high-interest yielding currency.

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Introduction to Axion



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What is Axion?

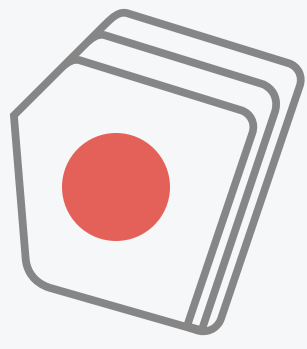
Axion is an emerging global monetary system, designed to increase the purchasing power of the ecosystem participants. This is unlike traditional monetary policy where mass-inflation is used to primarily fund corporate bailouts. When new currency is added to the ecosystem, and a negligible amount of it goes to the people, the purchasing power of the population diminishes significantly year-over-year. Axion changes this oligarchy dynamic by generating interest daily directly to the network participants through fixed inflation. Imagine if the interest from the Federal Reserve went directly into your savings account. This is what Axion offers through its Certificate of Deposit System.



0x2

The Answer to a Broken Financial System

Axion is the answer to our global financial markets that are on the brink of disaster. The original solution to this impending collapse was Bitcoin, a decentralized peer-to-peer currency. However, since its inception, certain aspects of Bitcoin, such as lack of speed and high fees, have shifted Bitcoin into more of a store-of-value than a currency. Axion is that currency.



0x3

Development Teams

RockNBlock is the development team behind Axion. RnB previously created mywish.io (partner of Binance, NEO, RSK), swaps.network and participated in Hex Money development.

- <https://rocknblock.io/>

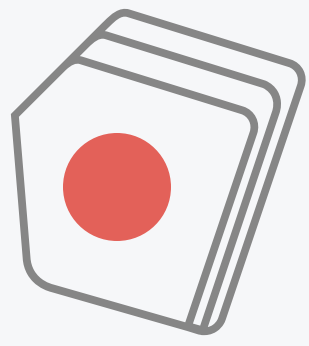
Hacken is the first audit team used to perform third party audits of Axion's code and systems.

- <https://hacken.io/>

Certik is the second audit team used to perform third party audits of Axion's code, systems and economics.

- <https://certik.io/>

Axion Features



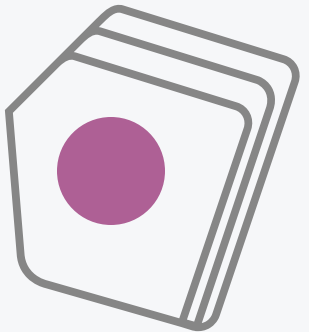
0x1

Better Staking

Axion inflation rate is 8% per year.

All tokens purchased through buybacks are distributed directly to stakers. This will increase the staking rewards dramatically

100% of inflation is paid out to stakers, and stakers earn proportional to their stake.



0x2

Daily Auctions

Every day, users can bid ETH into the daily Auction Pool to purchase Axion. How much Axion they earn is directly proportional to how much they put in compared to the rest of the pool. If you put in 10% of the ETH for that day, you earn 10% of the Axion in the pool. All Daily Auction entries are automatically staked for a 14 day period.

The Axion in the auction pool comes from:

- Unconverted Axion/Late Freeclaims:

- Every week HEX2T holder's waits to convert to Axion, a cumulative 2% of their balance is added into the Auction Pool
- Portions penalized from late/over-limit HEX freeclaims are added to the Auction pool, more details on HEX freeclaims can be found in section 0x4

- Early Exit and Late Withdrawal fees:

- If you end your stake ahead of the committed time period, you pay a penalty that goes to the Auction pool
- If you don't withdraw after your stake is completed, you pay a penalty that goes to the Auction pool



0x3

Minimum Auction Bid

Minimum Auction Bid is a Daily Auction price protection mechanic that restricts too much Axion from being distributed through daily auctions for a comparatively low amount of ETH.

Initial minimum bid = (7 day average price of HEX2T before mainnet launches) - 10%

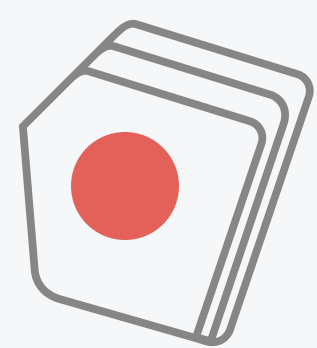
Taking into account self referrals, Uniswap pricing would have to surpass a 40% discount in order to make Uniswap the better option for acquiring AXN, thus auctions should remain optimal for a majority of users.

Optimal pricing of auctions results in more buybacks, staking, and general system participation.

Example:

Current AXN price on Uniswap is 1.5Mil AXN/ETH, there is 10Mil AXN for auction today and 10 ETH enters the auction, that would be considered above minimum bid, by this example's current Uniswap rates, so it would pass untouched. Each ETH bid in this example would get 1Mil AXN.

If the next auction day, current AXN price on Uniswap is still 1.5Mil AXN/ETH, and 10Mil AXN was up for auction but only 1 ETH entered the auction, that would surpass minimum bid rate and the extra AXN would be passed to later auctions. The 1 ETH bid in this situation would receive 1,650,000 AXN, the other 8,350,000 AXN would be passed to a later auction.



0x4

Freeclaims for Hex Holders

While the two projects are not officially affiliated, we applaud Hex for their innovation of certificates of deposits, and bringing this financial instrument to cryptocurrency.

While Hex may have been the first mover in this specific application, we saw that there was inequality in the Hex system in regards to both the staking rewards and the ETH auctions. In the interest of transparency and community-centric ideals, our system fixes the problems we have identified and puts the community above all else.

HEX Freeclaims will be available over a 350 day period, beginning at launch of mainnet (Day #1). Each ETH address containing HEX on snapshot date (staked or unstaked) will be able to claim to receive free Axion up to 1:1 or 100% of your HEX balance with a maximum cap of 10 million tokens.

Day #1 claims will begin at a rate of 100% of your HEX balance, with each successive week decreasing by cumulative 2% (0.2857% penalty applied daily).

Example:

If your ETH address contained Hex balance of 100,000 and you choose to claim on Day #1 you will receive 100,000 Axion and no Axion will be sent to the auction pool. If you wait to claim until Day #14 you would receive 96% or 96,000 Axion and remaining 4,000 Axion would be sent to the auction pool. Day #21 = 94%, Day #28 = 92%, and so on.

If you missed the available freeclaim period (After Day #350), you would receive 0% or 0 Axion and all of your freeclaim amount would be sent to the auction pool.

Penalty Formula: $\text{Penalty} = (\text{HEX} + \text{Shares amount}) * (\text{days since freeclaim starts}/350)$

You choose which day to claim (1-350/100%-0.2857%), but you only claim once for any given address.

Regardless of which week you choose to activate your freeclaim the Axion received will be autostaked for one year from the claim. So the faster you claim the earlier your staking rewards begin. Conversely the longer you wait to claim the lesser % of the token you receive between 100%-0%, and the longer the delay in being able to collect staking rewards.

Snapshot for HEX Freeclaims was taken May 28th, 2020. So whatever the HEX balance was in any given address on that date is what is available by the address key holder to freeclaim against. Plan your moves wisely.



0x5

Liquidity Amplifier

Staking “Liquidity Pool Tokens” has clearly become an absolute powerhouse token value and liquidity booster for a lot of crypto projects.

To stake an LP token:

- 1) You first need to own/buy the base token (AXN), which increases buying pressure.
- 2) You then fund a uniswap liquidity pool with an equal \$ amount of AXN and ETH.
- 3) Once you add the liquidity, Uniswap automatically generates you a LP token as a “credit”
- 4) You stake that LP token and you have helped the projects token price, increased the liquidity, all the while earning a sizeable return!

A top success factor of projects these days is the depth of their liquidity pool.

10% of the dev fund has been put into a 6 month reward pool (5B tokens).

If you are the only one staking LP tokens for that 6 month period, you will have earned 5B AXN tokens!.

If you make up 50% of the pool from day one, you’ve now earned 2.5B tokens.

Rewards will be calculated on minute-by-minute basis, so you can stake and unstake whenever you want.

The Liquidity Amplifier will add massive amounts of liquidity and buy pressure to AXN.

This staking portal will be fully audited and launched nearly at the same time as mainnet.

Once month 5/6 rolls around, a new proposal would launch to see if we want to continue with a duplicated LP staking pool, make alterations, or pivot altogether.

How would this affect the "normal" staking and the auction?

- a) People earn more in "normal" staking because less people are staked in the main portal
- b) More purchases would go through the lobby, as people buy up AXN to stake in the Liquidity Pool

Axion Roadmap



HEX2T token is launched

May 29th, 2020

**HEX2T token is
trading on Uniswap**

**Open-Source Github
repo goes live**

June, 2020

**Mainnet Conversion
1 HEX2T : 1 Axion**

October, 2020

**Axion listed on
larger exchanges**

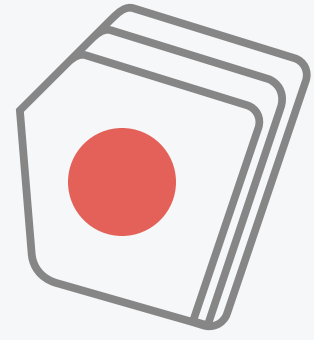
**Development of
Axion begins**

**Axion Staking
interface completed**

August, 2020

**Daily Auction
goes live**

**Ecosystem additions
TBA**



0x1

Background

The world of banking finance has not changed for the last fifty years. Plagued by centralization and controlled by central authorities, banks are nothing more than structures by which governmental institutions track the flow of money of their citizens. While banks are needed for any modern civilization to function, the backing of today's currencies are based purely off of faith and trust. Take for example the U.S. Dollar. Every Dollar used to be backed by Gold Reserves, but now that system is antiquated. Today, the US Dollar is backed by nothing but trust in the U.S. economic system. As we have seen over the last few months of coronavirus economic stimulus policies, the Dollar and interest rates can be manipulated at will by the Federal Reserve without any accountability.



0x2

Economics of Cryptocurrency

The rise of cryptocurrency has grown exponentially over the last three years as a result of the realization that these decentralized, transparent, and distributed systems can be the replacement for an archaic banking system which has not experienced any innovation. While many people have profited immensely from this revolution, many have been scammed through exchange hacking, and coins which are nothing more than “*pump and dump*” schemes where prices rise quickly and drop even faster in a short period of time. As a result, people have sought other ways to get into the crypto space in a more stable manner: mining and staking.

Mining may not be accessible to everyone as it requires a large initial investment into expensive GPUs (graphic processing units), which are upwards of \$300 and consume copious amounts of electricity. Since Bitcoin is a decentralized network not regulated by a single authority, networks of computers with these GPUs are used to verify transactions to make sure that they are valid. As a result of this verification process, which is quite computationally intensive, miners are rewarded a “*block reward*” in the form of a sliver of Bitcoin whenever new transactions are added to the blockchain. However, because the “block reward” is halved every 4 years and the price of Bitcoin is currently stabilizing, Bitcoin mining is currently not profitable unless performed at a massive warehouse-like scale.

The second way to get a more stable income source is through staking and is the basis for how Axion generates interest. Staking pays users who commit their coins to the Axion smart contract for a period of time which is to be measured in the units of days. When one stakes Axion coins he/she will not have access to withdraw those coins during this time but at the end of the staking period they will receive his/her coins and additional interest. The system works by the idea that the longer one stakes the more money he/she will get through bonuses for being a long term staker. All of these calculations are done automatically and securely on the blockchain so they are safe and cannot be manipulated by bad actors.



0x3

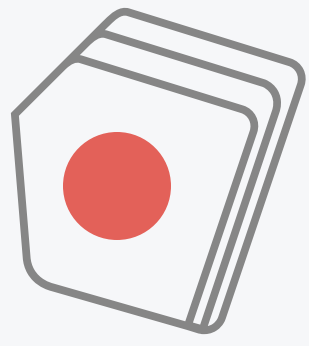
Axion Economics

Axion generates interest through the idea of inflation. The Axion smart contract doesn't just pay out Axion from its reserves to reward stakers randomly but on five basic principles.

1. The amount of Axion staked by a user.
2. The total amount of Axion staked by everyone else.
3. The period for which the user staked their Axion.
4. The Axion flat inflation rate which is compounded daily.
5. The amount of ETH paid into the auction daily

Axion was inspired from the success of Hex having eclipsed a \$1 Billion market cap within four months. Axion's market cap is already growing at an exponential rate. We decided to take some of the factors behind the success of Hex and make it less “founder focused”. Rather than rewarding the founder more for the success of Hex, we wanted to reward the community and stakers. Axion is designed to be a system where you can park your money and have it grow at an incredibly fast rate.

Axion Deep Dive Cont.



0x4

Axion v. Hex

Here are the main key points behind the differences between Axion and Hex:

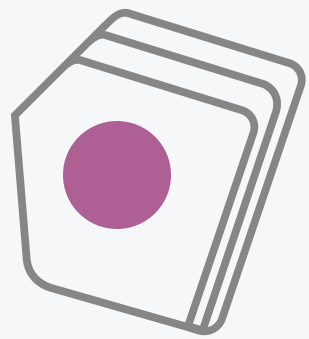
For every staking period, **80% of the ETH amount** that is used to purchase Axion in the Daily Auctions is used to buy back Axion tokens from exchanges, which are then distributed to stakers in proportion to their stakes. This will lead to a boost in the token economy and will provide higher incentives to stakers.

Axion has double the network inflation of Hex: **8% versus 3.69%**. This leads to **twice the ROI** alone for Axion. In the first year, approximately 40 Billion AXN will be distributed to stakers proportionately to their stake. 8% is the network inflation rate. If you were the only staker, you'd earn all ~40B AXN.

100% of the inflation is paid out to Axion holders and can be seen completely transparently on the blockchain.

100% of all "token penalties" are sent to auctions, which in turn benefits stakers. Unlike Hex, where only 50% of penalties go to stakers, and the other 50% goes to the founder

The founder owns no tokens. Yes, The founder owns **no tokens**. Tokens are used for community incentives, and auction eth is used to buyback tokens and distribute to stakers.



0x5

Axion Adoption

Axion will accelerate adoption by welcoming Hex holders to the Axion ecosystem. Hex holders will be able to freeclaim **Axion at a 1:1 ratio for every Hex they hold, or have staked**. This is capped at 10M Axion per Hex holder. Anything over 10M goes to the Auction Pool.

To get their free Axion, Hex holders need to manually freeclaim Axion tokens. Every week that these coins go unclaimed, the amount of coins that an individual can claim decreases by **2%**. Penalized coins from late freeclaims then go into an auction where people can bid for them. **80%** of the ETH amount used to bid for the Axion from the daily auctions is used to buyback more tokens from exchanges like expressed above and the founder receives the other **20%** of the bid as compensation here. This is a unique format for compensation for the founder and shows that only as a result of long term success of the project can the founder reap his/her capital appreciation.

Axion is one of the first projects of its kind to not have founder-owned tokens, have a proven precursor concept in Hex, and a strong community focus. The mission of Axion is to give a product to the community to grow their capital by compounding it with interest. The fundamentals behind Axion are meant to create a unique product for the community and provide users with a competitive certificate of deposit system so that they can grow their finances even faster than before.

Axion Deep Dive Cont.



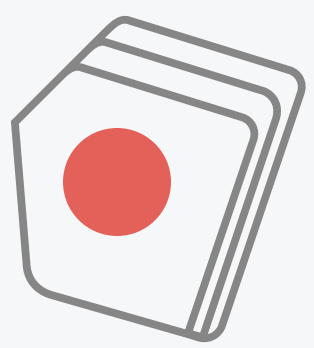
0x6

Early Unstake Penalty for Freeclaimed Axion

Freeclaimed Axion is autostaked for a year. If a user unstakes early, the stake amount is penalised as early unstake penalty. The penalty tokens are sent to the auction pool.

A user can't unstake partially, which means that if one wishes to unstake then the whole amount gets unstaked and penalties are levied on that.

Such penalties for a particular day are also added to the auction pool for the next day, part of the late claim penalties.



0x7

Late Axion Freeclaim Penalty

There is a Late Claim Penalty for users which are late to freeclaim their Axion.

Axion freeclaimers lose 2% of their claimable amount every week their Axion goes unclaimed. This rate continues for 50 weeks, until 100% of their claimable amount is penalized.

Calculations: Late Freeclaim Penalty = (HEX + Shares) * (Days since Freeclaim Start/350)

Note: Late freeclaim penalties are sent to the Auction Pool. (More Details Below)



0x8

Freeclaimed Axion Examples (with Late Claim Penalty)

A user has a claim of about 100 Axion post freeclaim start date.

- **Freeclaim Start Date:**
 - A will get $100 * 1$ (No Late Claim Penalty = 0 Axion Penalty)
- **Day 1 post Freeclaim start:**
 - A will get $100 * 0.99714$ (Late Claim Penalty = 0.286 Axion Penalty)
- **Day 51 post Freeclaim start:**
 - A will get $100 * 0.85429$ (Late Claim Penalty = 14.571 Axion Penalty)
- **Day 200 post Freeclaim start:**
 - A will get $100 * 0.42857$ (Late Claim Penalty = 57.143 Axion Penalty)
- **Day 350 Post Freeclaim start:**
 - A will get $100 * 0.0$ (Late Claim Penalty = 100 Axion Penalty)

Axion Deep Dive Cont.

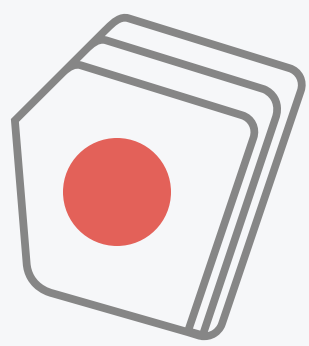


0x9

Conversion to Axion

HEX2T token holders will be able to convert their HEX2T to Axion via the built in claim tool, available on the Axion dApp website.

Post-Mainnet launch, HEX2T token holders will burn the HEX2T token to get the Axion token (in a 1:1 ratio). Unlike Freeclaimed Axion, 0% of the Axion converted in exchange for HEX2T will be auto-staked and they will be directly transferred to the holder's wallet.



0x10

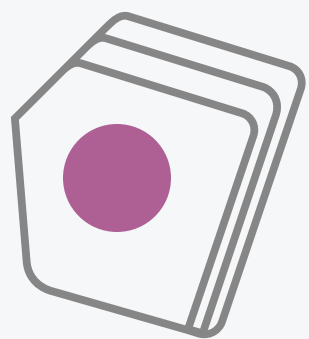
Late HEX2T Conversion Penalty

There is also a Late Conversion Penalty for users which are late to convert their HEX2T Axion.

Such Axion converters also lose a cumulative 2% of their convertible amount every week their HEX2T goes unconverted (0.2857% penalty applied daily). As days progress and come close to day 350, the penalty increases till the convert amount becomes zero.

Calculations: Late Convert Penalty = 1 - (Days since Mainnet Start/350)

Note: This 2% weekly penalty is used for the Daily Auction Pool. (More Details Below)



0x11

Amount of Axion Available for Auction

Each day, an auction is processed for users to stake their ETH to get the Axion available in the auction. Axion available for the auction are pooled via 3 sources (majorly from penalties):

1. From Unconverted Axion

Every week a cumulative 2% of the unconverted Axion (both Freeclaimed and HEX2T) are set out for auction. This 2% is broken into a 0.2857% daily penalty

This is shown on the platform as the late conversion penalty.

2. From Late Stake Claim and Early Unstake Penalties

All late stake claim and early unstake penalty tokens are computed for the previous day and added to the auction pool. (Details for Late stake and Early unstake penalty tokens are below)

3. From HEX Freeclaims over the 10M per wallet limit

Maximum Axion freeclaim limit per Hex wallet is set at 10 Million Hex (inclusive of Heart), one can't claim any more Axion for their Hex over the 10 Million Limit.

All over-limit Axion will be up for auction. Each week, there will be a single day where these tokens will be added to the auction pool.

Axion Deep Dive Cont.



0x12

Penalties: Early Unstake

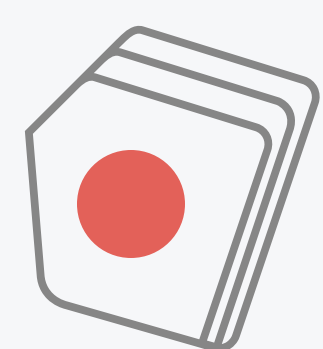
The staking feature allows the user to unstake before the committed time although the user pays a penalty for this.

Once someone initiates unstaking, the payout due to them is computed based on the days they were staked. Thus the payout is their principal + summation of payout they received per day.

Penalty is computed in the following ways:

- Penalty is a percentage of how early the user unstaked
 - Penalty percentage is No. of days committed days left/Total Committed Days.
 - Example:
 - A user stakes 100 Axion and gets 50 Axion as their share in the payout pools for the days they are staked for
 - The user commits to stake for 100 days, but unstakes after Day 20
 - Payout Penalty is 80/100 or 80% of the Final Payout
 - Final Payout = 20% of (Earned Interest + Principal)
 - In the example above, only 30 Axion will be return (20% of 150 Axion)

All early unstake penalties for a day are tabulated and added to the auction pool for the next day.



0x13

Late Unstake Penalty

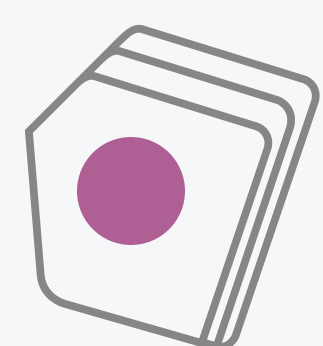
The system penalizes a user for leaving their stake unattended after their committed period is over. There is a grace period of post which penalties are levied.

The final payout (principal + payout) is penalized at 0.143% per day (1% per week)

Example: User's Payout of 100 Axion are available for claim at the end of 50 days (stake period)

- Grace Period: Day 51-64 - No penalty
- Penalty Period: Post Day 64 - Penalty of 0.143% per day is levied
- Note: In about 2 year unclaimed status, the entire payout is lost including the principal.

All late unstake penalties for a day are tabulated and added to the auction pool for the next day.



0x14

Transformation

Users can participate in the auction, by staking their ETH to get Axion.

For every auction, a set number of Axion are put up and users can pool their ETH to get these. A user's claim is equal to the Axion in the auction * [ETH they contributed/Total ETH contributed]. The Axion they earn is dependent on their ownership of the ETH pool. Auction pricing is further managed by the Minimum Auction Bid, which is explained in Section 0x3 of this whitepaper.

Example: Let's assume 100 Axion are available in the auction pool.

- "A" stakes 1 ETH in the auction and a total of 10 ETH are pooled as the auction ends.
- Hence, A owns 10% of the pool. (1/10)
- As A owns 10% of the pool, A will get 10% of the Axion ie. 10.

80% of the ETH deposited daily into the auction is used to purchase Axion directly from exchanges and these Axion tokens are then added to the payout pool for the day. Thus, they are distributed to the stakers. (More details below)

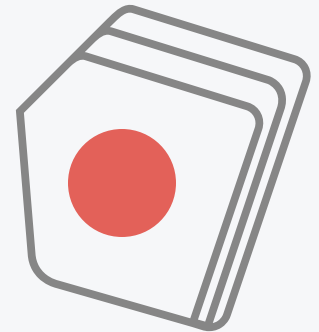
Axion Deep Dive Cont.

**0x15**

Multiple Entries and Exits into the Auction

Entering an auction entails sending ETH to the contract function. All ETH sent during a given day is tallied and any following day, an exit Function may be called to claim the share of the transformed Axion. Thus there are no late claim penalties for Axion obtained via the auction.

It's possible to make multiple entries in a day and the exit function shall allow claiming the entire amount in one transaction.

**0x16**

Staking

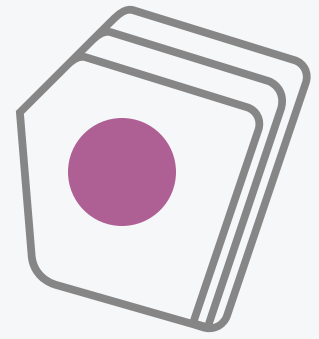
Staking involves locking Axion into the smart contract itself for a period of time (in days).

During the staked period, one is not allowed access to the staked Axion.

At the end of the staking period, the holder receives the Axion staked plus interest (this is the payout).

Minimum stake period is 1 day, maximum stake period is 5555 days.

This works like the Certificate of Deposit Facility.

**0x17**

Shares

Shares are important as the payouts are drawn from the reward pool (more on this below) on the basis of shares held/total shares in the reward pool.

Payout (for each day) = Axion in Reward Pool for the day * (No.of shares held by the holder/Total Shares in the reward pool for the day)

The shares received by staking are dependent on the Bonus Multiplier and the Share Price.

The concept of shares is the same as that of the Hearts (in particular for the Snapshot), mentioned above. More info on Shares in 0x20.

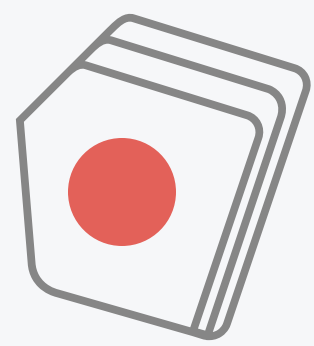
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Bonus Multiplier

The platform rewards stakers which stake for longer. This is delivered via the Bonus Multiplier.

No. of Share = No. of Axion * Bonus Multiplier.

Axion Deep Dive Cont.



0x19

LongerPaysBetter

The idea is to reward users for staking for longer. The longer duration for their stake, the more shares are given as bonus.

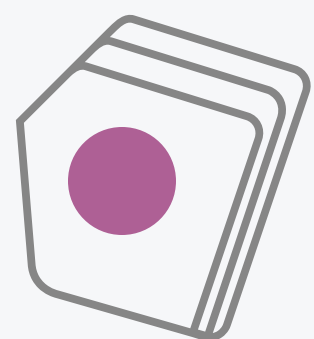
The formula is **(days staked - 1) / 1820**. The “minus 1” accounts for the minimum stake period of 1 day.

So for each year, the bonus comes to about ~20%. Staked for 365 Days - 20% Bonus, 730 Days - 40% Bonus and so on.

This bonus, as well as the maximum stake period, is capped at about 15 years of staking or 5555 days.

Final Calculation of Bonuses

Shares = Axion Staked * (1 + Bonus% LongerPaysBetter)



0x20

Share Rate

Total Shares Issues = (Axion Staked * Bonus Multiplier) / **Share Rate**

At the beginning of the platform, the Global Share is 1 and is designed to always increase.

Increasing Share Rate

The idea of an always increasing Share Rate is to benefit the stakers which were early to stake their Axion. As the Share Rate increases, the shares issued decreases even if the staker is staking the same amount of Axion for the same duration. This is done to always make sure that the staker who staked early has better return then the staker who came late.

Calculation of the New Share Rate

Every time a user ends their stake, they burn the shares they held. At this point, the platform runs an inverse share conversion function to calculate the new share rate.

The platform uses the payout (principal +interest) received at the end of the stake, the duration of the stake and the number of shares destroyed as the stake ends, to compute the new share rate. The new share rate reflects the rate at which a user gets the same number of shares destroyed for staking all the Axion minted (post the end of the stake).

Calculation:

Initially as stake begins: **shares = (input Axion + bonuses(factoring input Axion, stake days)) / Share Rate**

Inverse calculation after stake ends: **New Share Rate = ((input Axion + payouts) + bonuses((factoring input Axion + payouts), stake days)) / shares destroyed**

Result: **If New Share Rate > Global Share Rate, New Share Rate will be used as Global Share Rate**

Thus, if the New Share Rate is higher than the current global Share Rate, the global Share Rate is updated. If not, it remains the same.

Axion Deep Dive Cont.

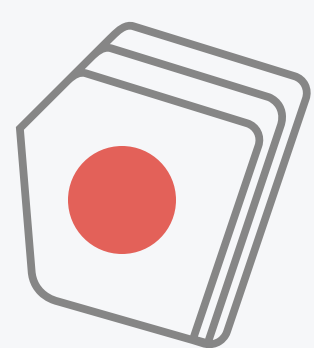
**0x21**

Payout at End of Stake

At the end of the staking period, the smart contract goes back to each day of the term and accumulates the total payout as the sum of user's share/total shares * payout for each day. The contract mints the required Axion and credits them to the target wallet.

Users are able to stake earlier than the stake period mentioned but there are penalties for the same. (Discussed Below)

Users are also penalised for leaving their payout unclaimed after the staking period is over. (Discussed Below)

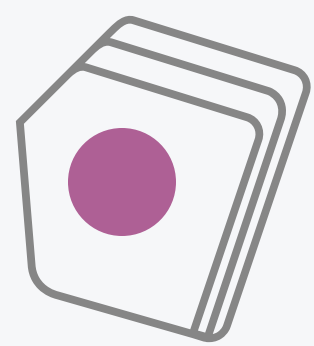
**0x22**

Payout Pool

The contract accumulates a payout pool per day and based on the shares held by stakes, this pool is paid out.

At the end of the staking period, the smart contract goes back to each day of the term and accumulates the total payout as the sum of user's share/total shares * payout for each day.

The payout pool is made of the interest rate (based on the Inflation Rate) and the tokens auto-bought from the Exchanges using 80% of the ETH deposited via the Auction.

**0x23**

Auto-Payout to Axion Holders

80% of the ETH staked in the auction is used to buy back the Axion tokens via exchanges, thus increasing the value of Axion for the holders.

This Axion bought via the exchanges is added to the payout pool for the particular day and thus distributed to Axion stakers for the day. The following is governed via a non-custodial immutable smart contract with set parameters for auto-buyout from exchanges and distribution via payout pool.

Although, there is a vulnerability with the following model: The following model of 80% of ETH going to buy Axion from exchanges leaves open **significant arbitrage opportunities** for users who may wish to gamify the system. Users will be able to figure out when the platform will buy Axion from exchanges every day (timing), thus they will purchase Axion from the exchanges themselves prior to that and sell once the 80% ETH is used to buy Axion and the price goes significantly up.

To control the following the smart contract is designed to exchange Axion from exchange as soon as the ETH is deposited in the auction pool, instead of doing it all at once.

Axion Deep Dive Cont.

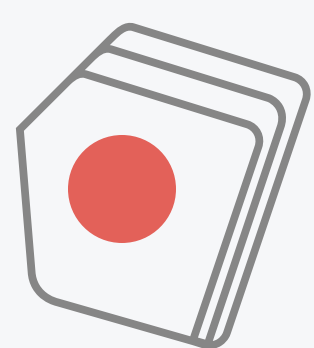
**0x24**

Payout Pool: Inflation Component

The payout pool is filled with the daily interest of 0.021087% of the total coin supply. This comes out to 8% annual, compounded daily for 365 days.

The total coin supply is computed as total Axion and shares in the holder's wallet on the Axion platform.

There are additional inputs to the payout pool discussed below.

**0x25**

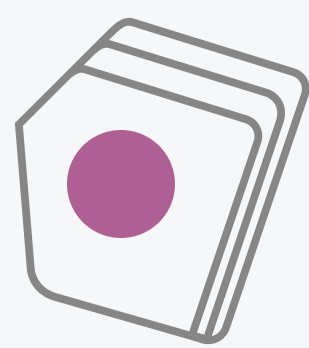
BigPayDay

The concept of having a BigPayDay is to allocate the unclaimed freeclaim Axion tokens to the stakers at the BigPayDay (Day 350).

Token Pooling Mechanism

For each day after Axion claiming process goes live, 0.2857% (1/350) of the unclaimed Axion are earmarked for the BigPayDay pool. As the day goes by the BigPayDay pool gets bigger, as unclaimed Axion gets added.

On BigPayDays which happen once every year (for 5 years), all tokens in the BigPayDay pool are added to the Payout Pool for that day. Stakers who are staked on that day are entitled to payout based on how much of the share pool they own.

**0x26**

Token Division for the 5 BigPayDays

BigPayDays are supposed to happen once every year for 5 consecutive years. The calculations for the amount of tokens distributed each year on account of the BigPayDay are:

1. Year 1: 10% of the Tokens are distributed
2. Year 2: 15% of the Tokens are distributed
3. Year 3: 20% of the Tokens are distributed
4. Year 4: 25% of the Tokens are distributed
5. Year 5: 30% of the Tokens are distributed



0x27

BigPayDay Eligibility

Only stakers which are staked for periods of 350 days or more, and are active when a BPD hits, will be eligible for the BigPayDay Payout.

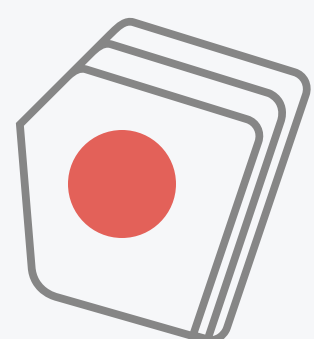
Thus, all users are incentivized to be staked (and for a period of over an year) at the date of the BigPayDay as the payout will be massive.

Example:

If a stake was set for 350 days from the very first day of mainnet launch, that stake would be eligible for the first BPD. If a user waited until a week before the first BPD, and set a stake for 350 days, they'd still receive the first BPD for that stake.

Calculation of Payout on BigPayDay

Payout Pool Calculations for Big Pay Day: Tokens in Payout Pool (Via daily inflation and auto-bought ETH and BigPayDay Tokens) * (1+ Critical Mass Bonus + Virality Bonus)



0x28

Referral Program

Link Generation

The website allows users to generate a referral link.

The link basically contains the wallet address and thus is quick to generate and share, via the website.

This is for entries related to the Daily Auctions.

This sets a cookie in the browser of the person who clicks it.

The cookie merely states the referrer's wallet address and is read by the auction and thus both the referrer and the referee are rewarded.

Axion for referral payouts is freshly minted.

Bonus to the Referrer (who refers)

The referrer gets 20% of the auction entry value obtained by the referee. The bonus Axion is transferred to the target account.

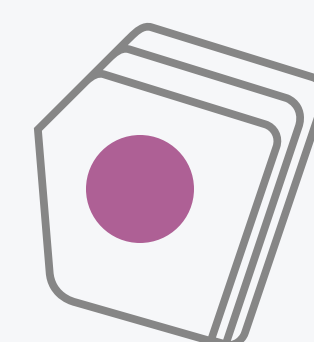
Bonus to the Referee (one who uses the link)

The user who used the link also gets a 10% bonus on their auction entry value.

Example for Referring Mechanism

Using the link, a user enters auction and receives 10,000 Axion.

- The Referrer gets 20% Bonus ie. 2000 Axion
- The Referee gets 10% Bonus ie. 1000 Axion



0x29

Governance for Smart Contract Upgrades

As the platform is run via Smart Contracts, there needs to be a mechanism to allow for edits or changes in them. Such upgrades affect the platform and the users as a whole thus, their needs to be a community driven governance mechanism to allow for such updates.

Axion Mathematics



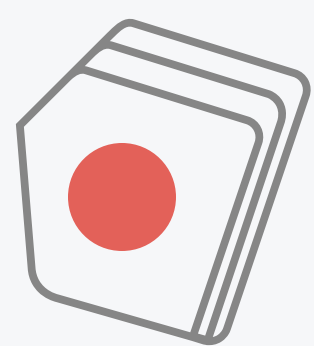
0x1

Supply Stats

The initial supply is dependant on how many users claim their AXN. The potential initial supply is 500 Billion tokens.

The inflation rate will be 8% annually, 40 Billion tokens.

On average, that equates to 109.5 Million tokens daily.



0x2

Penalty Stats

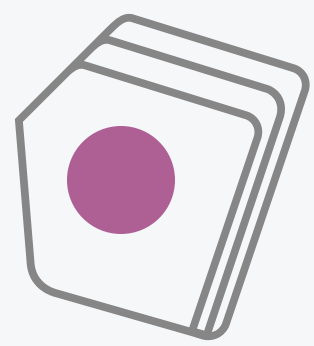
How much additional value will come from Late claim/ Early Withdraw?

In the Hex system, 500M out of 250 B Hex are in the auction pool daily.
That's about 1/500 of the total supply daily.

This 1/500 metric does not account for the 50% of tokens that the founder keeps for themselves.

Meaning, we anticipate 1/250 of the Axion total supply will be in the auction daily from penalties.

1/250th is 2 Billion tokens. At 25% marketcap, that is worth \$1.2 Million Dollars, DAILY.



0x3

Buyback Stats

How much additional value will come from the 80% ETH token buybacks daily?

In the Hex system, \$3 Million of ETH enters the auction pool daily.

In phase 1, with 25% marketcap, that equates to an additional \$750,000.

Total amount of value distributed daily in phase one will be:

$$\begin{array}{r} \$1,200,000 \\ \$750,000 \\ + \quad \$65,000 \\ \hline = \$2,015,000 \text{ DAILY} \end{array}$$

Axion Mathematics Cont.



0x4

Mathematics

As development of this token is ongoing and details are subject to change, here is the mathematical basis behind the economics of staking.

We can start out by defining the variables for the total token supply and staked amounts which are a function of the day i .

$S(i)$ = total token supply at day i

$H(i)$ = total staked amount at day i

Then we can determine the daily payout rate denoted by the function $P(i)$. We designate I to represent the fixed inflation rate which is 8% in Axion.

$$P(i) = (S(i) + H(i)) * I$$

On any given day we can represent the amount staked for a given individual on a given day by the simplified expression below that is a function of the time period to be staked in days d , amount staked initially staked by an individual h , and current day i .

$s(d,h,i)$ = current stake

Therefore, the total staked at a given time can be represented by the function $H(i)$ below where n represents the total number of individuals in the staking pool.

$$H(i) = \sum_{i=0}^n s(d,h,i)$$

The final formula for the expected returns can be thus given by the equation below as a function of the staking period d and the staked amount h .

$$f(d,h) = \sum_{i=0}^d \frac{P(i) * s(d, h, i)}{H(i)}$$



0x5

BigPayDay Payout Calculations

1) 1/350 of the HEX Late Claim penalty goes to BigPayDay (BPD) pools, the calculations are following:

bpd_amount = *penalized_axion_to_claim* / 350

bpd_pool_1 = *bpd_amount* * 10 / 100

bpd_pool_2 = *bpd_amount* * 15 / 100

bpd_pool_3 = *bpd_amount* * 20 / 100

bpd_pool_4 = *bpd_amount* * 25 / 100

bpd_pool_5 = *bpd_amount* * 30 / 100

penalized_axion_to_claim - the amount of penalized Axion tokens

bpd_amount - the amount goes to BPD

bpd_pool_(1-5) - BPD reserves by years

Tokens are accumulated on the BPD contract from each penalized user.

2) When the BPD term comes, the SubBalance contract is called. It takes the amount accumulated over the past year, rolls up inflation and the Critical Mass and Virality bonuses, and mint the tokens.

2.1) At first, we calculate Inflation

inflation = $8/36500 * (\text{token_supply} + \text{shares_supply})$

token_supply - AXN tokens total supply

shares_supply - Shares total supply

inflation - AXN tokens amount to be minted

2.2) then, Critical mass and Virality coefficient calculation

critical_mass_coeff = *current_claimed_amount* / *total_claimable_amount*

current_claimed_addresses - current number of claimed addresses

total_claimable_addresses - maximum number of addresses who can claim

virality_coeff = *current_claimed_addresses* / *total_claimable_addresses*

current_claimed_amount - current amount of claimed Axions

total_claimable_amount - maximum amount of claimed Axions

total_bonus_coeff = $1 + \text{critical_mass_coeff} + \text{virality_coeff}$

critical_mass_coeff - critical mass coefficient

virality_coeff - virality coefficient

total_bonus_coeff - total bonus coefficient

2.3) The reserve and inflation are added, multiplied by the coefficient

total_payout_amount = (*bpd_pool_X* + *inflation*) * *total_bonus_coeff*

bpd_pool_X - BPD reserve by year

inflation - minted inflation

total_bonus_coeff - total bonus coefficient incl. critical mass and virality bonuses

total_payout_amount - the total amount that for distribution among users

3) Payout to users

user_payout_amount = *user_shares* / *total_shares* * *total_payout_amount*

user_shares - user staking shares. Counts only for the users who stake more than 350 days and their staking period have to include BPD date

total_shares - total staking shares. Counts only for the users who stake more than 350 days and their staking period have to include BPD date

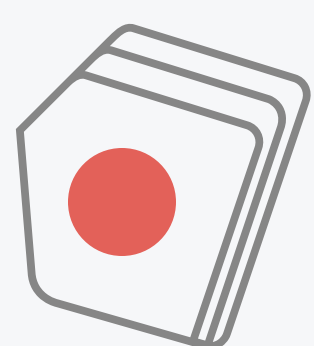
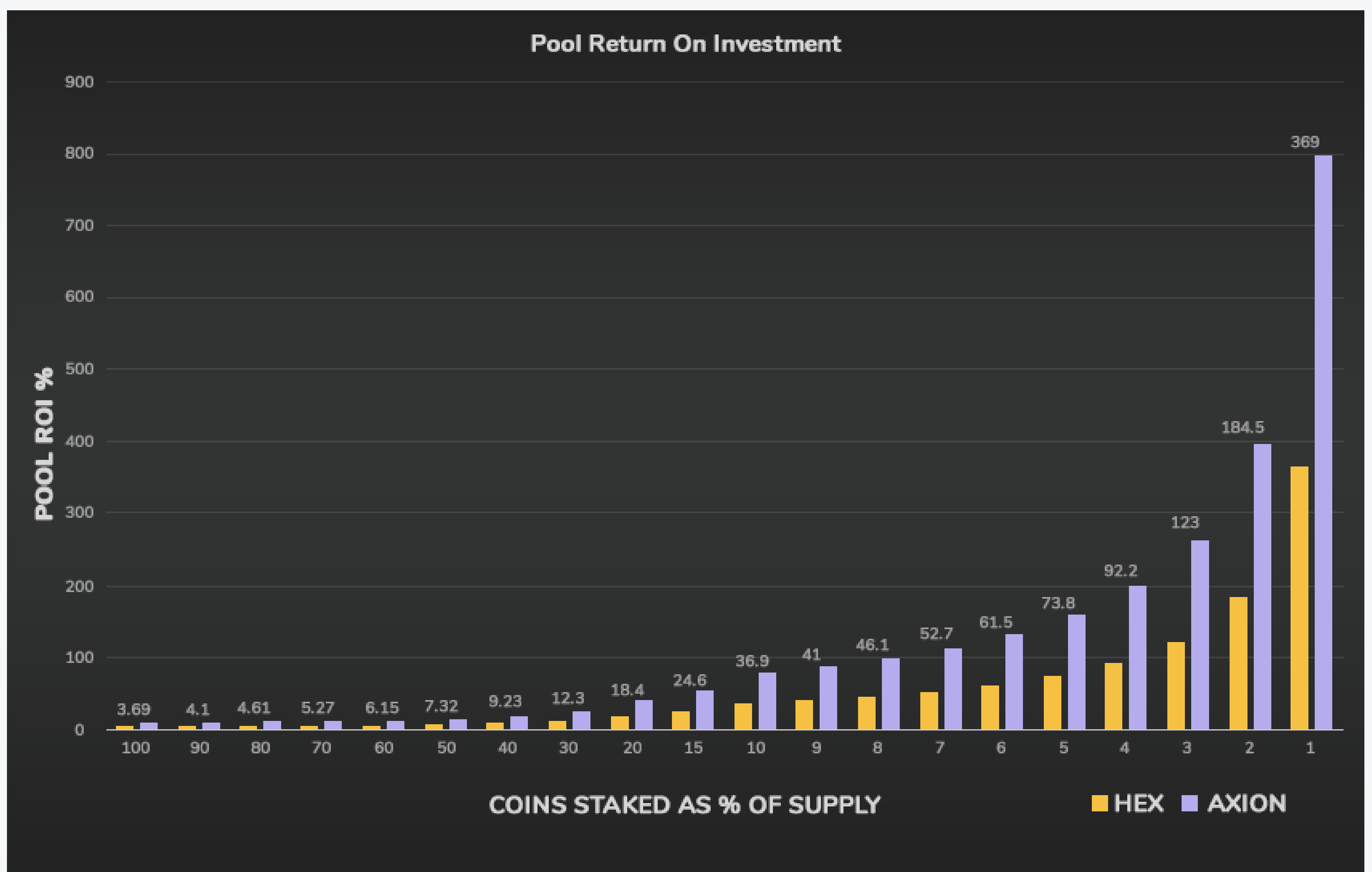
total_payout_amount - the total amount that for distribution among users

user_payout_amount - the amount the user will get

For the amount that the user will receive from BPD, penalties are applied according to logic similar to staking.



Axion Return Graph



0x1

Expected Return

One of the key differences between Axion and Hex is the inflation rate. With an inflation rate of 8% versus 3.69%, this leads to over twice the returns for the user. Not combining the other improvements such as the buybacks which will lead to higher prices of Axion, the graph above is a rough estimate of how much more incentive Axion provides versus Hex, based on inflation alone.



0x2

Axion is a New Monetary System

A global currency is now here.

The design is that you can lock up funds, and live comfortably off the interest.

This system has always been possible, Axion has just made it a reality.