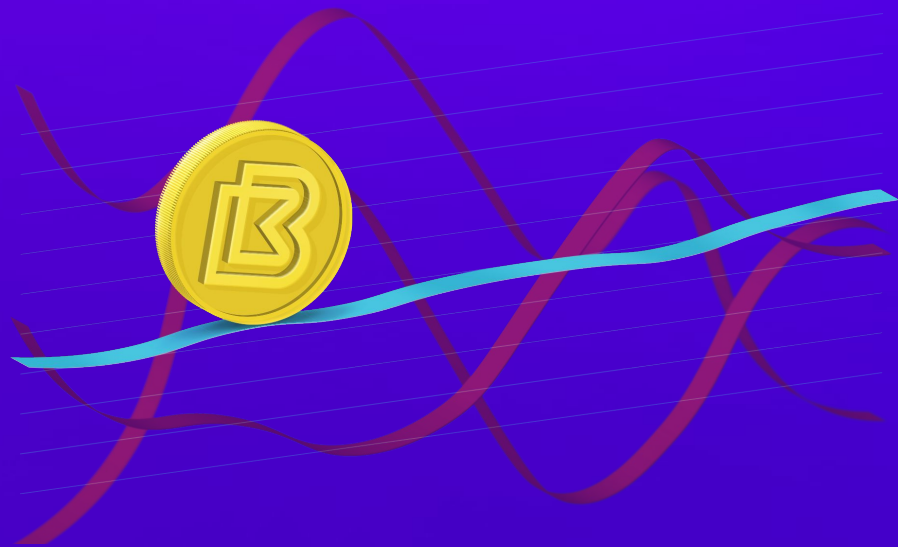




Dynamic Peg

A Visual Guide for Exchanges



OVERVIEW

- The Dynamic Peg works as an additional layer on top of the standard Bitcoin-style UTXO system.
- When the Dynamic Peg is inactive (Peg Index = 0), all coins maintain equal liquidity (current pre-release status).
- However, when the Dynamic Peg is activated, additional rules of liquidity are introduced **to the entire coin supply**. All transactions and blocks must then abide by these specific limits (post hard-fork).

BITCOIN TRANSACTIONS

- Typically, 1 Bitcoin is a disorganized pile of 100 million Satoshi coins.



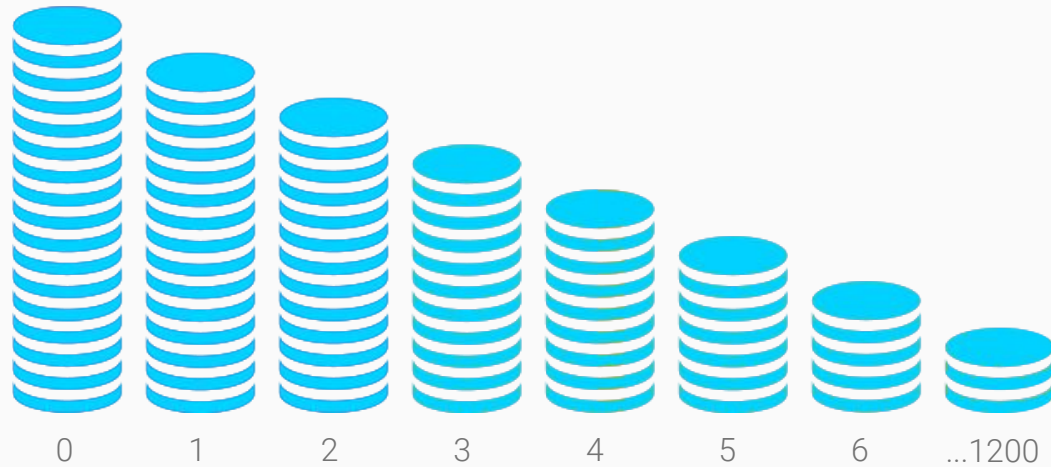
BITCOIN TRANSACTIONS

- A standard Bitcoin transaction splits and joins these coins.



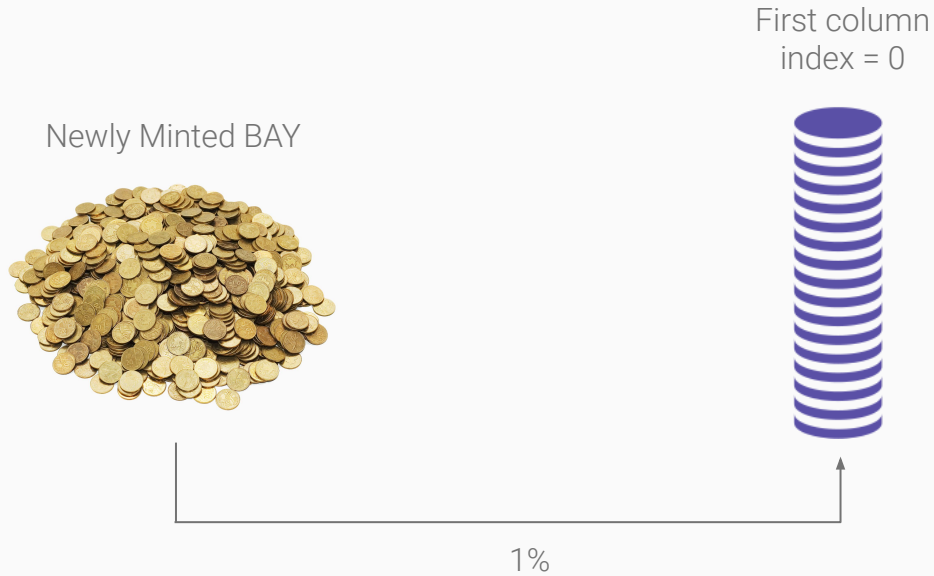
BITBAY PEG INDEX

- Unlike Bitcoin, BAY coins are organized into 1200 columns.
- Each of these columns have a unique index number.



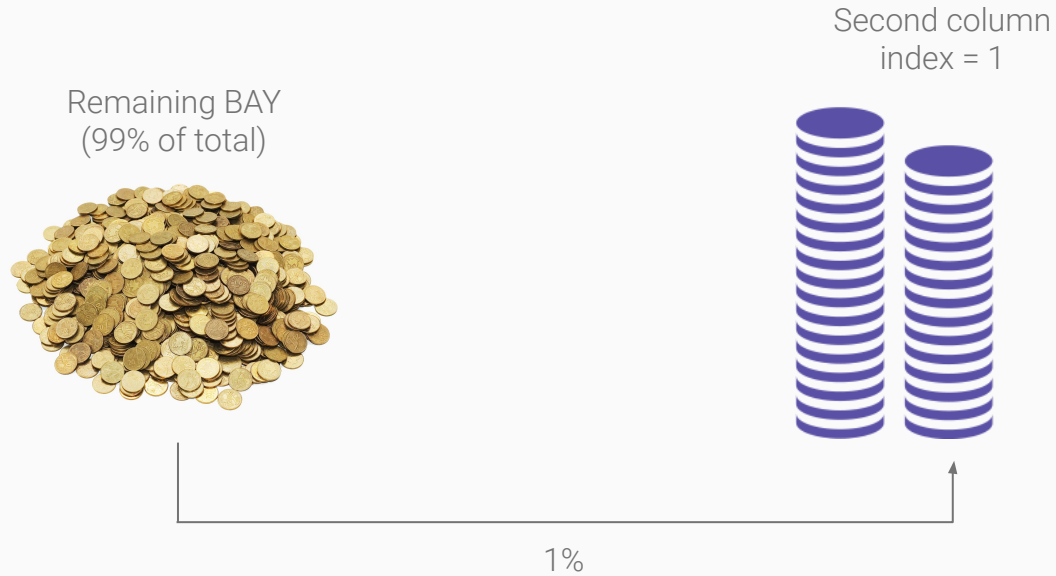
BITBAY PEG INDEX

- When new coins are created from staking, the first column (index = 0) receives 1% of these coins.



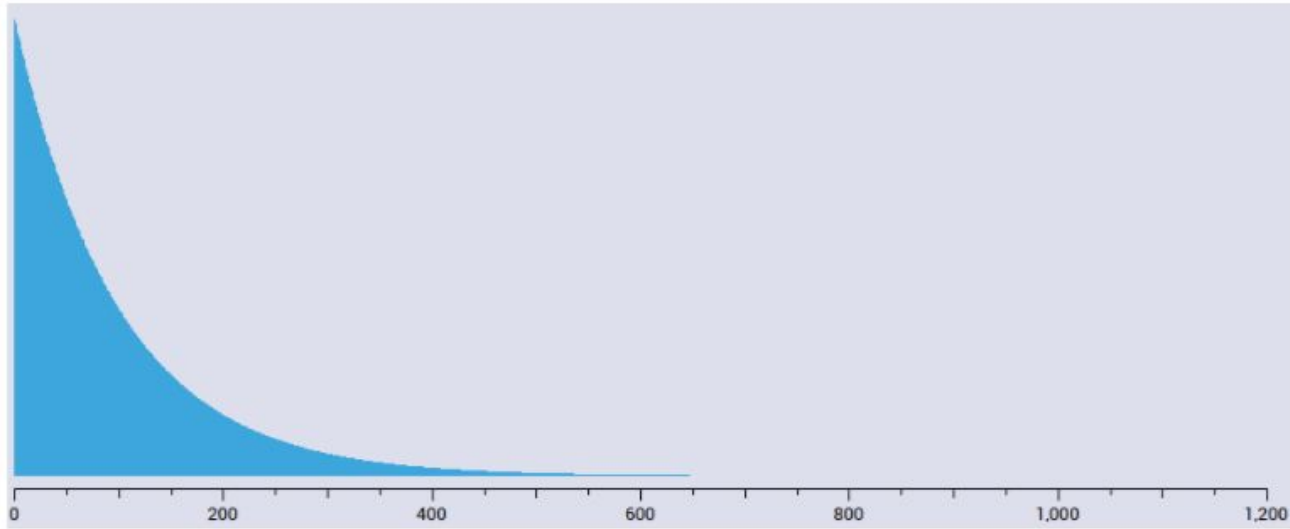
BITBAY PEG INDEX

- The second column (index=1) gets 1% of the coins that are left.



BITBAY PEG INDEX

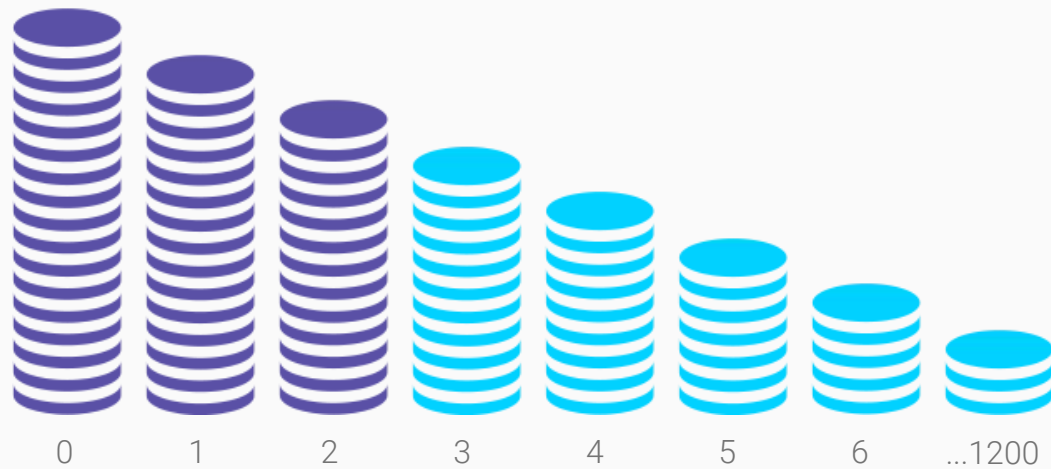
- The organization process continues until all coins from the pile are *exponentially* distributed into all 1,200 columns.



Screenshot from the BitBay Qt wallet

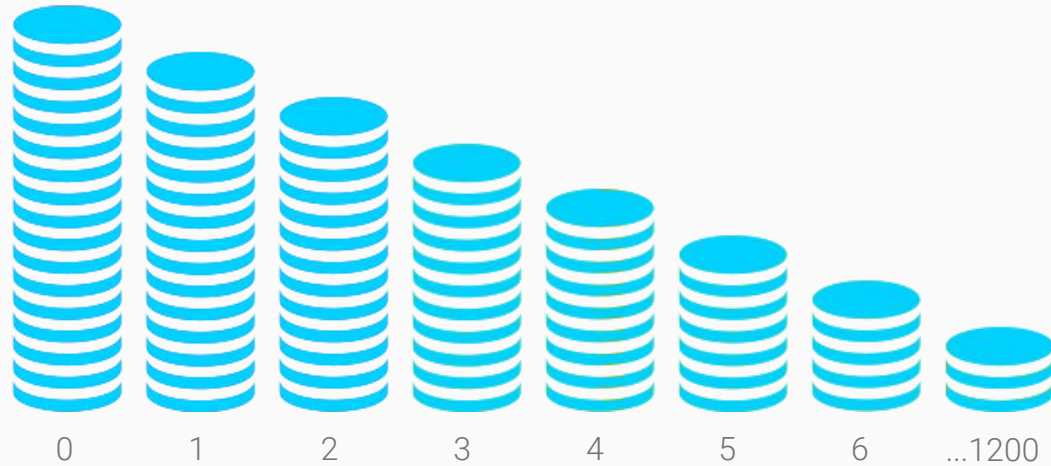
BITBAY PEG INDEX

- Each of the 1200 columns become either **liquid** or **reserve** status.



BITBAY PEG INDEX

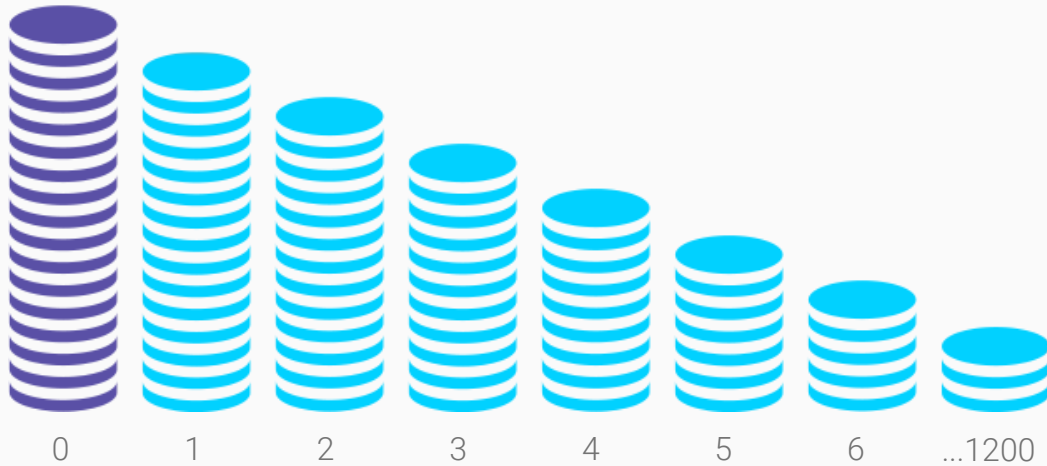
- When the peg index = 0, all columns (and coins) are 100% [liquid](#).



Peg Index = 0

BITBAY PEG INDEX

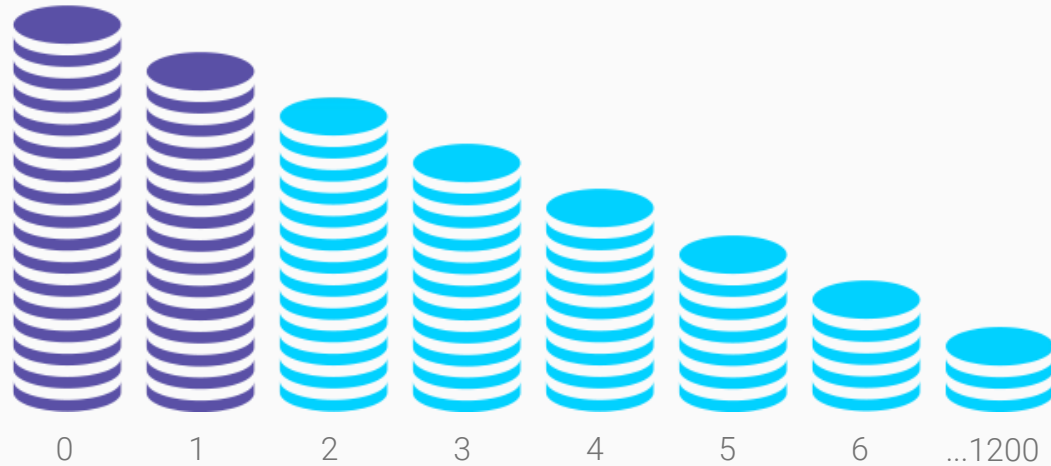
- When the peg index = 1, column 0 becomes **reserve status** (coins can only be sent with a 1-month timelock).
- All other columns/coins remain **liquid**.



Peg Index = 1

BITBAY PEG INDEX

- When the peg index level = 2, columns 0 and 1 become **reserve status**.
- All other columns/coins remain **liquid**.

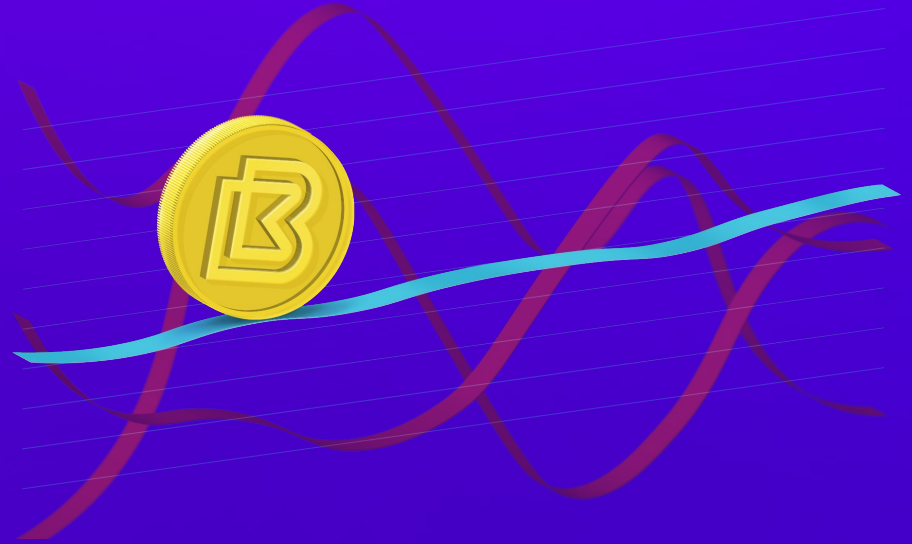


Peg Index = 2

BITBAY PEG INDEX

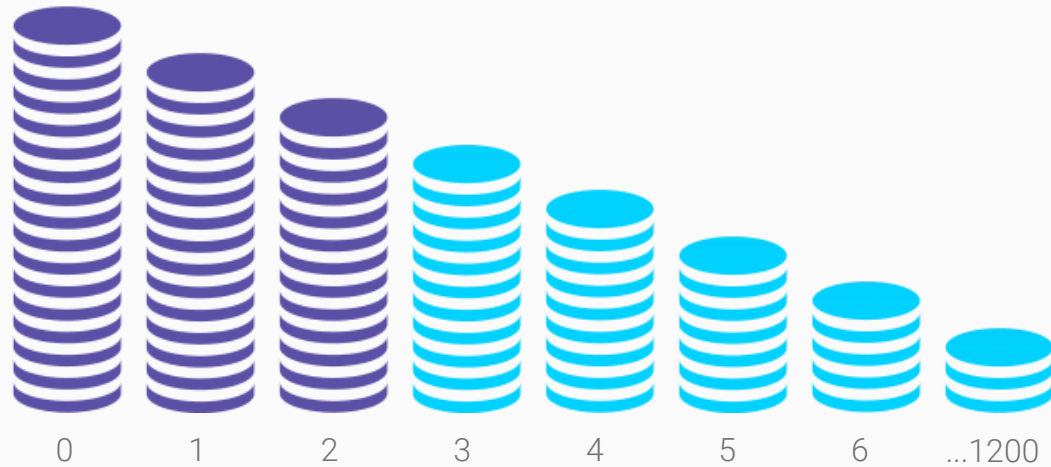
- Liquid coins can be spent without limits.
- Reserved coins can only be spent with a 1-month timelock.
- When coins are spent, they arrive at their destination within the same column as they left.
- Coins 'remember' their liquidity status while in transit.

An Example: BAY/BAYR Transaction



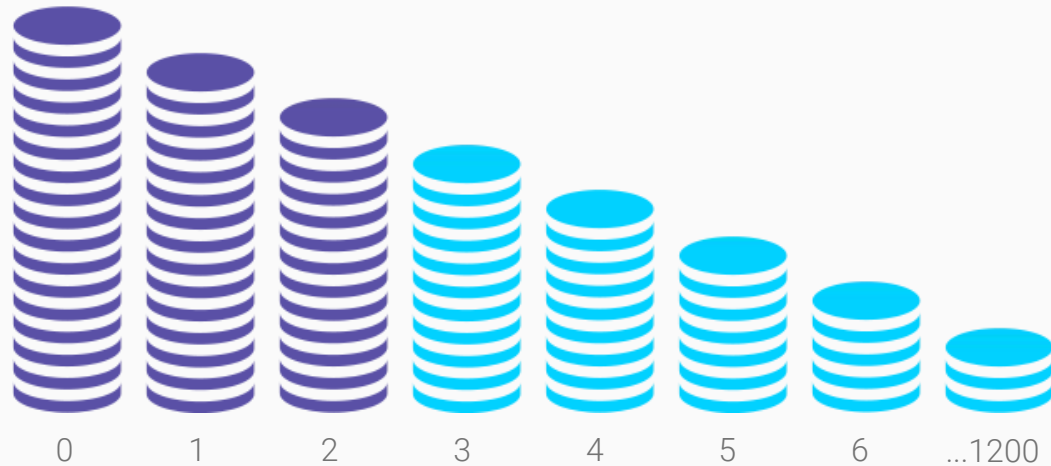
BITBAY EXAMPLE TRANSACTION

Alice has 34 BAY coins, 15 **liquid** and 19 reserve.



BITBAY EXAMPLE TRANSACTION

Alice would like to send 7 coins to Bob, but she can only do this **immediately** with **liquid** coins. **Reserve** coins can only be sent with a 1-month delay.



BITBAY EXAMPLE TRANSACTION

To send coins to Bob, Alice's transaction must use 7/15 of the **liquid** coins (*plus a correction for rounding*).

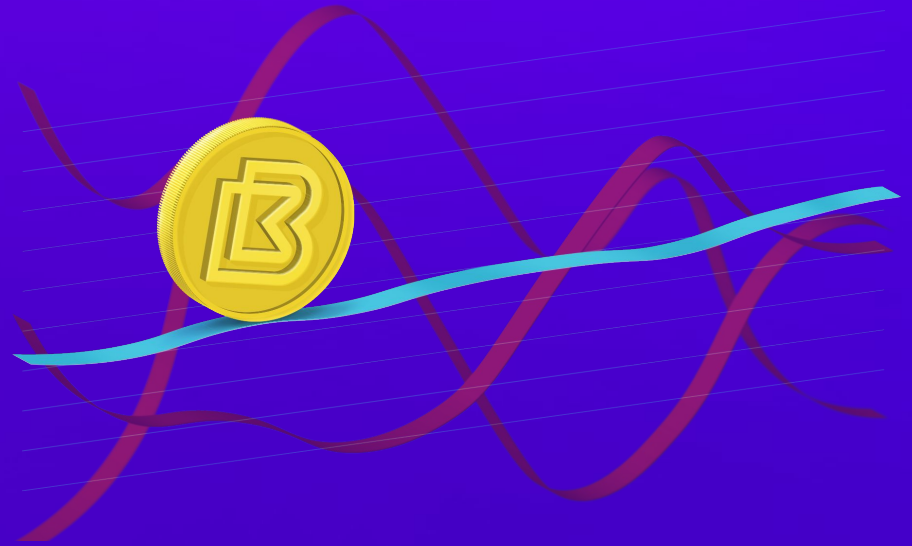


BITBAY EXAMPLE TRANSACTION

Once the transaction is completed, Alice has 19 **reserve** coins and 8 **liquid**, while Bob has 7 **liquid** coins.



Peg Index Management



Peg Index Management

- The index level management (deflation/inflation) is 100% decentralized! It is entirely controlled by stakers' votes.
- Each staker has 5 voting options:
 - **Automatic**
(Follows price target of BTC's ATH)
 - **Deflation**
 - **Inflation**
 - **No index Changes**
 - **Disable Voting Ability**

- Automatic (recommended)**
- Deflation**
- Inflation (auto to 2.08091)**
- No Changes**
- Disable**

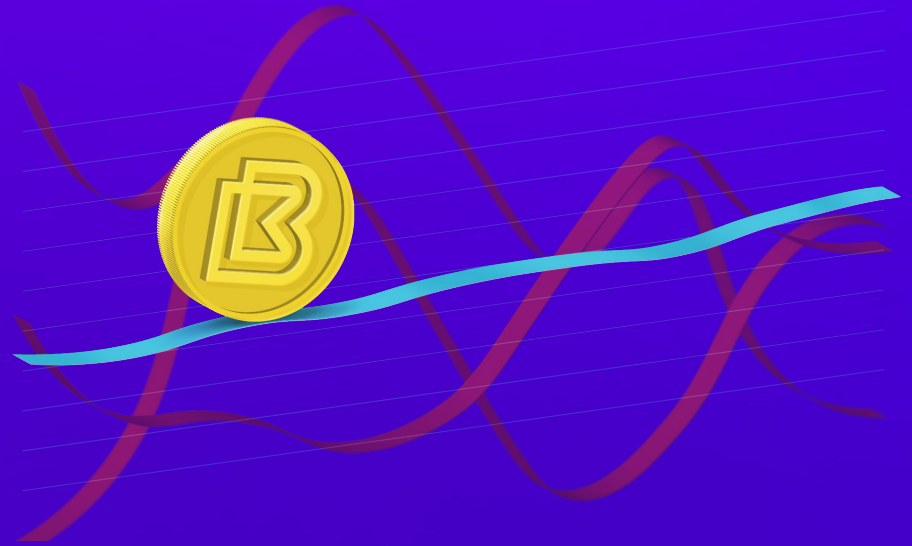
Peg Index Management

- The peg index level changes based upon consensus results, every 200 blocks.
- The level is limited to move 1-3% per voting cycle, depending on the weight of votes.

Peg Index Management

- A “variable voting power” incentivises stakers to hold a balance of both Liquid and Frozen BAY.
- In the beginning, when supply is 100%, the voting power for Liquid and Frozen BAY is the same.
- However as deflation occurs, the Liquid BAY votes become stronger. Liquid BAY votes can be up to 40 times stronger than that of Frozen BAY.

Variable Stake Rewards



Variable Stake Rewards

- A variable stake reward system incentivizes the HODLing of frozen BAY:
 - **Liquid earns 5 BAY** - Can be spent freely
 - **Reserve earns 10 BAY** - Can only be spent upon voluntary freezing
 - **Voluntary Frozen Reserve earns 20 BAY** - 1-month timelock
 - **Voluntary Frozen Liquid earns 40 BAY** - 4-month timelock
- These incentives offer protection against downward volatility, and encourage overall market stability.



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