A mathematical approach to crypto stability - a small nugget

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There are several solutions and attempts to bring cryptocurrency to a reach a stable environment both in value and price. One common practice is for coin or token to be backed-up with a security or assets. Another approach is to use for utility mechanism to support its value. Others used pegging to fiat and other means.

How about mathematics, could it bring a solution to acquire stability for the cryptocurrency.

Here is the theoretical approach to acquire stability in cryptocurrency through a mathematical proposition.

1) Greater than one

One suggestive concept is not to allow a lone coin or token to stand-out by itself but instead, we look for a group of highly coupled coins or tokens that are colluding to each other for the benefit of stability for all involved in the group. In fact, this is not just a group but a family of coins or tokens that are bound together to their intrinsic existence that one cannot stand alone by itself and its need the family in order to exist and define their own character and value. Each coin/token in the family is unique and has a vital role to play in the society, yet all coins/token are working together as a single unit for the benefit of the all of its member.

The coin or token exists because the family exists. This is how strong the binding in the family.

2) Proportional to the value ratio

Any two members of the family have a trust relationship to each other and can be expressed in a ratio. This value ratio determines their standing in the family and role they intended to perform in society. The bigger ratio gap means the different intention of use of purpose is achieved.

For a given coinA and CoinB, if two (2) coinA is equivalent to one (1) coinB, the value ratio will be 'two to one' or simple '2:1'. If coinA is priced at one (1) USD, the price of coinB will be two (2) USD, the price ratio would be '1:2'. Now if the price of each coinA has increased to two (2) USD, to conform to the value ratio, the price of coinB would be priced at four (4) USD, and the price ratio would change to '2:4'.

Now, the value ratio is '2:1' and the possible price ratios of coins/tokens in USD would be {'1:2', '2:4', '3:6', '4:8', '5:10' and so on..}. The price ratios can be also expressed in fractional numbers. Notice that the price ratios are all directly proportional to the value ratio.

If the traders are bullish on coinA was traded at four (4) USD, in order to confirm this increase, coinB should be also traded at eight (8) USD for market confirmation. This way the two coins are said to be in agreement with their price ratio is now '4:8'. But if the coinB has not changed its price and still traded at six (6) USD, then this means that the coinB is not supporting the price increase of coinA. Trust between these two coins is violated because the price ratio which is now '4:6' is not conforming to the value ratio. To amend this anomaly, either of the coins has to give-up their price level. Either coinA must be priced down to three (3) to make correct price ratio of '3:6', or coinB has to be priced at eighth (8) USD by the market to make a correct ratio of '4:8'.

Think about this, if the third coin is introduced in the family, there would be multiple confirmations of support of either price increase or decrease. The more coins added to the family the more accurate the price confirmation would be.

3) All are equal

To have a meaningful effect, first, the total supplies for each coin or token in the family must be a fixed amount. Second, the total supplies of each coin or token must also proportional to their value ratios. Third, with value ratio applied and total supplies, adhering to the value ratio, these will result in equal market capitalization of all coins or tokens involved in the family.

For a given coinA, coinB and coinC, if coinA and coinB has a value ratio of '2:1'; coinB and coinC has a value ratio of '2:1' also; this can be expressed in value ratio as:

(4 coinA) : (2 coinB) : (1 coinC)

For total supplies to maintain their value ratio, if coinA has four (40) million fixed supply, this would be expressed for all as:

(40 millions of coinA) : (20 millions of coinB) : (10 millions of coinC)

At this point, all total supplies are conforming to their value ratio.

Now, if coinA is priced by the market at one (1) USD, to maintain their value ratio, coinB and coinC would be priced also to two (2) USD and four(4) USD respectively. To calculate the market capitalization for each:

(40 millions x 1 USD) = (20 millions x 2 USD) = (10 millions x 4 USD)

(40M USD for coinA) = (40M USD for coinB) = (40M USD for coinC)

This lead to equal market capitalization of 40M USD for each coinA, coinB, and coinC. We could reason out that each member of the family has equal in total value thus equal also in importance.

Note, if the total supplies are not fixed, the correct proportional value ratio of the issued supplies must be observed.

In conclusion, a family of coins or tokens that are working for each other has the highest potential to achieve stability by supporting everyone in the family. The value ratio is the guiding principle of trust to maintain their price ratios always proportional to their value ratio. The more coins/tokens are involved in the family, the better the chance to accurately expressed the confirmations of price level for any coin/token involved. This price confirmations, based on value ratio, will be used as a feedback from coins/tokens themselves to make chaotic traders become informed traders. The value ratio may appear to be expressing hierarchy but the reality speaks of equal importance on all coins or tokens involved in the family.

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Adding Artificial Intelligence to cryptocurrency – a crazy idea
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