

# CRYPTO-MIP – Stability Methodology of Stable Coins

<sup>1</sup>Devesh Sharma, <sup>2</sup>Kunal Aggarwal, <sup>3</sup>Shubham Yadav, <sup>4</sup>Madhumita Mahakur, <sup>5</sup>Monika Rani

<sup>1,2,3,4</sup>Students, <sup>5</sup>Asst. Professor, Department of Computer Science Engineering), Krishna Engineering College Ghaziabad, India. <sup>1</sup>sharmad090909@gmail.com,

<sup>2</sup>kunalaggarwal16509@gmail.com, <sup>3</sup>madhumita.mahakur@krishnacollege.ac.in,

<sup>4</sup>shubham.yadav@krishnacollege.ac.in

**ABSTRACT** - This paper analyzes the stability of cryptocurrencies and provide a framework to make it more stable. Stable coins provide a way for users to take advantages of digital cryptocurrencies like ability to make payments globally. We also show that stable coins contribute to volatility of cryptocurrencies and how important are the stable coins in cryptocurrency market. In this paper, we systematically discuss about the general design and various design elements which are used to make cryptocurrencies more stable.

**Keywords** – Crypto, MIP, Coin.

## I. INTRODUCTION

The aim of stable coin is to make the cryptocurrency stable so that people can use them in their day to day transaction.

Crypto asset prices are famous for their volatility i.e. their prices changes most frequently. As the crypto asset suffers by high price volatility, which makes them incapable of performing the three functions of money. Those three functions of money are:- 1) a store of value 2) unit of account 3) medium of exchange and above all that Stability is the key function to all of these three.

Let us understand each terminology in detail:-

**STORE OF VALUE** :- if people store their wealth in an asset that constantly changes in value then accordingly their wealth also changes and no one wants such a fluctuation or changes in their wealth because one day it is something & other day it is something.

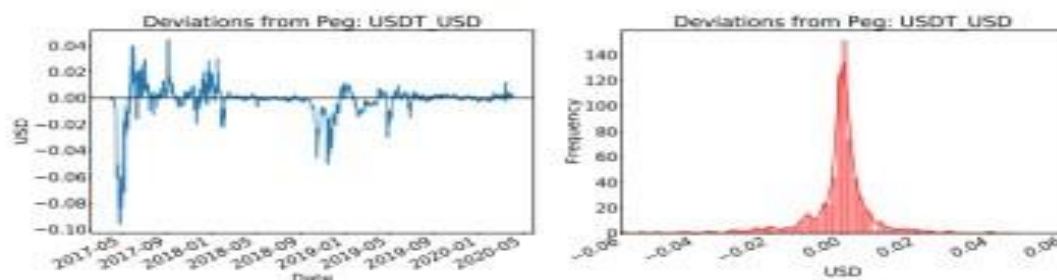
**UNIT OF ACCOUNT** :- as prices changes very frequently therefore, everytime the value of unit of account has to be change & everything need to be adjusted accordingly.

**MEDIUM OF EXCHANGE**:-the most important & crucial part, an asset or currency need to be stable to function as a medium of exchange;so that people can predict what value they actually get while exchanging their good and services.

So here comes the role of the STABLECOIN

Stable coin are class of crypto asset that makes the cryptocurrency or cryptomoney stable and protect them to suffer from price volatility. As the name suggest they are designed to eliminate the volatility by converting it with an asset such as gold, silver etc. Or fiat currency such as USD to remain stable. There are number of stablecoin in the market as well as number of projects ongoing. For example :- facebook launched project LIBRA, so that underserved population can get the financial access and provide faster and most efficient payment across the globe.

Figure 1: Tether/USD Deviations from Peg and Histogram of Deviations



Note: Figure plots the deviations of the Tether/USD price from parity (left panel). A positive deviation indicates Tether/USD trades at a premium. The right panel indicates a histogram of deviations of the Tether/USD peg. Data from Coinapi. Sample is April 2017 to March 2020.

What are Stable coins?

Solid coin is a new class of cryptocurrencies that seeks to provide price stability and is backed by fixed assets. Stablecoins has gained momentum as it tries to offer the best of both worlds - fast and secure processing or privacy for payment of cryptocurrencies, as well as stable balances without the instability of fiat funds.

With solidcoins that can be defined as digital tokens, based on a set of stabilization tools (e.g. fiat currencies), the problem of high volatility should be solved. In addition to being used as a storage value, solidcoins can have very high potential in other countries (Bullmann, Klemm & Pinna, 2019).

Why Stable coin?

- A stable currency, like Bitcoin, is part of a broader cryptocurrency umbrella; however, what makes it stand out from the crowd, as a very honest face, is that it does not bear the brunt of major falls or the potential financial risks of terrorism.

### Categories Of Stable Coins

There are 4 categories of Stable Coins :-

- Fiat – Collateralized Stable coins.
- Commodity – Collateralized Stable coins.
- Crypto – Collateralized Stable coins.

Non- Collateralized Stable coins.

### FIAT - COLLATERALIZED STABLECOINS

- † Fiat-collateralized stablecoins are the simplest structure a stablecoin can have, and simplicity has big advantages.
- † It's easy to understand for anyone new to cryptocurrencies, which can allow for more widespread adoption of this new technology.
- † Most fiat backed stablecoins are backed with dollar reserves. † The reserve for the currency is administered through an independent custodian that is audited on a scheduled basis to ensure compliance.

### CRYPTO COLLATERALIZED STABLECOINS

- † Crypto-collateralized stablecoins are decentralized, allowing processes to be even more trustless, secure, and completely transparent.
- † This allows crypto-backed stablecoins to be much more decentralized than their fiat-backed counterparts, since everything is conducted on the blockchain.

### COMMODITY-COLLATERALIZED STABLECOINS

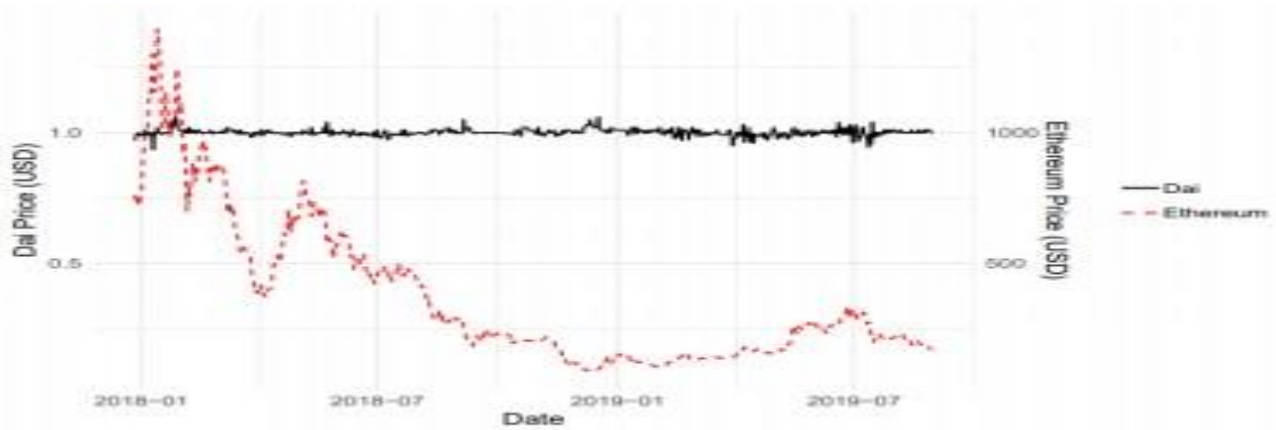
- † Commodity-collateralized stablecoins are backed by other kinds of interchangeable assets, such as precious metals.
- † The most common commodity to be collateralized is gold — however, there are also stable coins backed by oil, real estate, and baskets of various precious metals.
- † These commodities even have the potential to appreciate in value over time, which gives increased incentive for people to hold and use these coins.
- † These kinds of assets have generally only been reserved for the wealthy, but stable coins open up new possibilities of investments to average individuals globally.

### Non- Collateralized Stable coins.

- † Non-collateralized stable coins are not backed by anything, which might seem contradictory given what stable coins are.
- † This is the most decentralized and independent form of stable coin, as it isn't collateralized to any other asset.
- † This means even if the US dollar and the entire crypto market crashes, this form of stable coin would survive and stay stable.
- † These types of coins use an algorithmically governed approach to control the stable coin supply.

### II. STABILITY MECHANISM

- Off-chain Collateralized: Value is pegged by traditional currencies or commodities, often requiring a trusted third party to control the collateral.
- Tokenized Funds: Funds transferred by users in fiat currency are converted into the corresponding amount of tokens.
- On-chain Collateralized: Backed by a cryptocurrency or a set of cryptocurrencies in a decentralized manner, often in combination with mechanisms to decouple the stablecoin price from the collateral value.
- Algorithmic Stablecoins: Rely on a combination of algorithms and Smart Contracts (SC), being supported by users' expectation on future purchase of their assets.



**Fig. 3.** DAI remains relatively price stable despite decline in ETH price.

### III. BENEFITS

#### 1. Peer-to-Peer Focus

The bitcoin payment system is purely peer-to-peer, meaning that users are able to send and receive payments to or from anyone on the network around the world without requiring approval from any external source or authority.

#### 2. Elimination of Banking Fees

While it is considered standard among cryptocurrency exchanges to charge so-called makers and takers fees, as well as occasional deposit and withdrawal fees, bitcoin users are not subject to the litany of traditional banking fees associated with fiat currencies.

#### 3. Very Low Transaction Fees for International Payments

Since bitcoin transactions have no intermediary institutions or government involvement, the costs of transacting are kept very low. This can be a major advantage for travelers. Additionally, any transfer in bitcoins happens very quickly, eliminating the inconvenience of typical authorization requirements and wait periods.

#### 4. Accessibility

Because users are able to send and receive bitcoins with only a smartphone or computer, bitcoin is theoretically available to populations of users without access to traditional banking systems, credit cards and other methods of payment.

### IV. CONCLUSION

Stablecoins, that is, low power, organized, and monetized, promise to close the gap between fiat currencies and digital currencies. Their importance in turning billions of assets into digital is fully evident.

### REFERENCE

- [1] How stable are stablecoins? by Lai T. Hoang and Dirk G. Baur University of Western Australia June 5, 2020.
- [2] <https://decryptionary.com/what-is-cryptocurrency/introduction-to-cryptocurrency/>

- [3] <https://www.algorand.com/resources/blog/stablecoins-for-banks-and-fintechs>

- [4] <https://blog.wazirx.com/what-are-stablecoins/#:~:text=The%20primary%20objective%20of%20stablecoins,exist%20on%20the%20Ethereum%20blockchain>

- [5] SoK: A Classification Framework for Stable coin Designs by . Amani Moin , Kevin Sekniqi , and Emin Gun Sirer.

- [6] Stablecoins – Classification of stablecoins and their impact on the financial sector. Published in 2019.

- [7] [www.irjmets.com](http://www.irjmets.com) @International Research Journal of Modernization in Engineering, Technology and Science.