



Project report
On
Stable Coin Supply & Activity Distribution

Project Guide:

Prof. Partha Sarathi Paul
Institute of Engineering & Management (IEM)
Department Of Information Technology

Submitted by:

Akash Biswas
Roll: 10400218022
Enroll: 22018002004012

Certificate

This is to certify that the project entitled “Stable coin supply & Activity Distribution” has been submitted to the Department of Information Technology, Institute of Engineering and Management, Kolkata, for the fulfilment of the requirement for the degree of Bachelor of Technology in “Information Technology” by following students of the final year B.tech (Information Technology).

Student Name: Akash Biswas

Roll: 10400218022

Dept of Information Technology

Prof. Partha Sarathi Paul
(Project Guide)

Prof. Indraneel Mukhopadhyay
(Head of the department)

ACKNOWLEDGMENT

I would like to share my sincere gratitude to all those who has helped me in completion of this project. During the work I had faced a plethora of challenges due to lack of knowledge and experience but these people helped me get over all the difficulties with their expertise and experience and in final compilation of my idea to a shaped sculpture.

I would like to thank Prof. Partha Sarathi Paul sir for his governance, guidance, continuous help and mentoring because of which I was able to learn the minute aspects of project work.

I would also like to thank the management of Institute of Engineering and Management, Kolkata for gracing me with such an opportunity to learn from these experiences.

I am also thankful to my entire class and most of all to my parents who have inspired me to conquer all the challenges and win all the hurdles in life.

Thank You,

Akash Biswas

ABSTRACT

One of the biggest changes in the crypto industry over the past years has been the emergence and development of stable coins. Split across many networks (Bitcoin, Ethereum, Cardano and many more) and issues (Tether, Circle/Coinbase, Binance, etc). These assets share many similarities such as the price, often use the same smart contract (ERC-20) and serve similar users.

In this project, we will look at stable coin's network data and try to understand how their uses varies across the networks they are based on and their issuer. More particularly, we will look at Tether (on it's Omni, Ethereum and Tron versions), Paxos, USDC, TrueUSD, Gemini Dollar, HUSD, Binance USD and USDK.

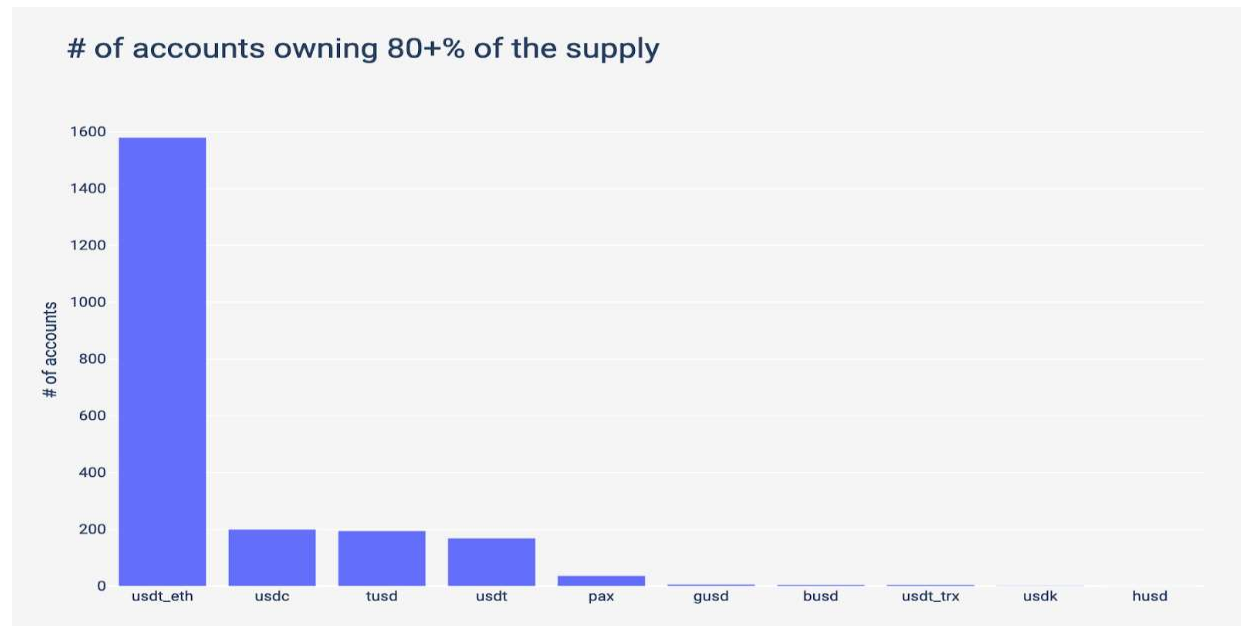
INTRODUCTION

Stable coins are cryptocurrencies that are linked or pegged to a real-world asset. Most often this is a fiat currency such as the US Dollar, The British Pound or even Indian Rupees, but they can also be tied to other assets like gold and oil. Stable coin offers steady valuation and stability in a market that is prone to extreme changes from one day to the next. There are few other purposes stable coins serve however, for example since a stable coin offers a predictable and steady value, it can be used for transaction just like a fiat currency. Many in the crypto industry view this as a significant step towards adoption. Additionally, since these coins have a stable value, they would be used for use for recurring payments, utilities, rent and salaries are always stable coins can be used. This in contrast to the volatility of other crypto currencies which makes it difficult to make regular payments since the value can change drastically from one month to the next quicker.

Stable coins offer a secure way to get into the crypto currency market without exposure to the volatility associated with the more standard crypto currencies available like Bitcoin and Ethereum. Stable coins with fiat backing provide investors with the opportunity to trade on crypto-to-crypto platforms without the need to first buy a major cryptocurrency.

SUPPLY DISTRIBUTION

The supply distribution of a stable coin can help us understand how it is used. If it is only used on few exchanges without much other activity, most of the supply will be concentrated in few addresses. On the contrary, if it's used by several exchanges and users, it will be more broadly distributed.

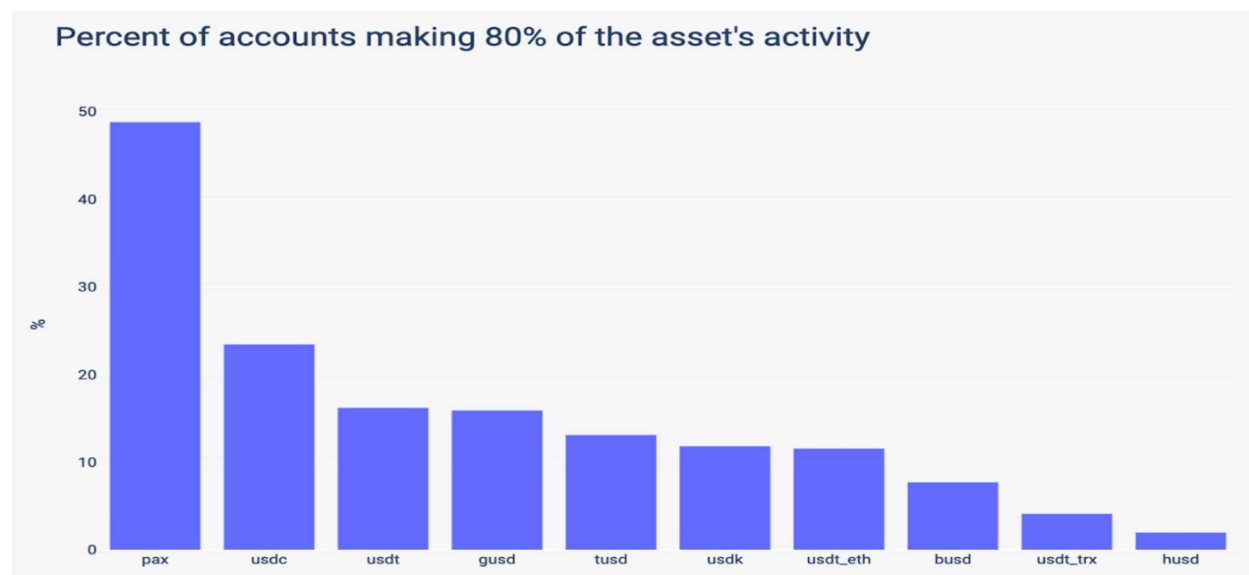


The USDT that is using ERC 20 smart contract shines as being particularly well distributed among its holders. Whereas, approximately 6 accounts own 80% + of the supply for Gemini Dollar, BUSD (Binance USD), Tether (Tron), USDK and HUSD.

USDK has a particularly strange supply distribution. 3355 accounts hold USDK, but 3170 (94%) only own either \$0.5 or \$1 which they received in July 2019 from an account who in turn got its money from Okex.com. Given barely any recipient spent their money, it doesn't seem to be a traditional airdrop.

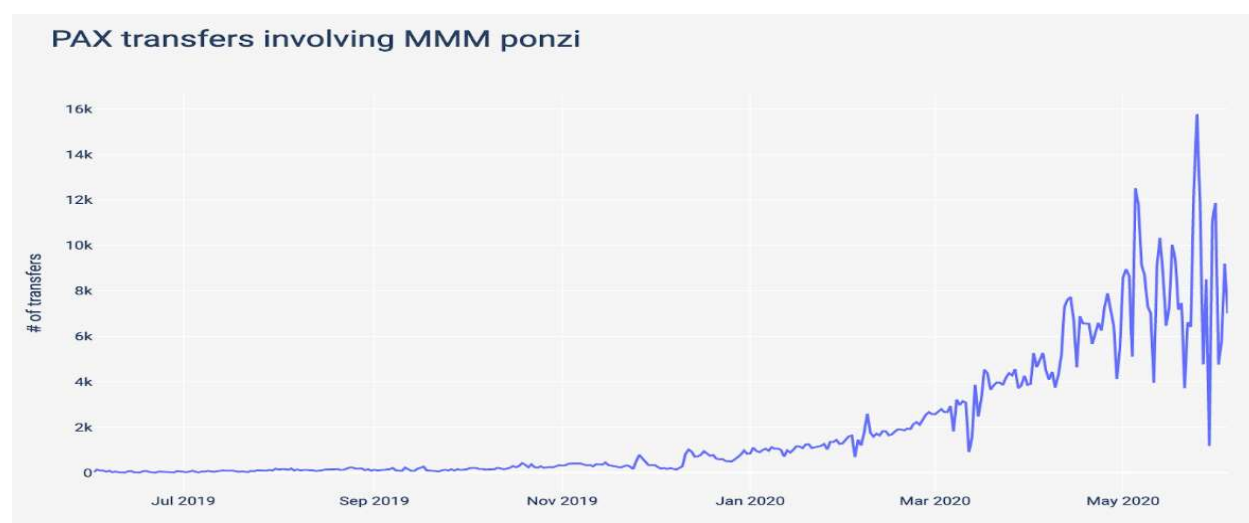
ACTIVITY DISTRIBUTION

One more way to compare stable coins is by looking at how many accounts are responsible for the majority of the on-chain activity. If a small number of accounts are responsible for most of the transactions, it shows a lack of use outside of a handful of exchanges

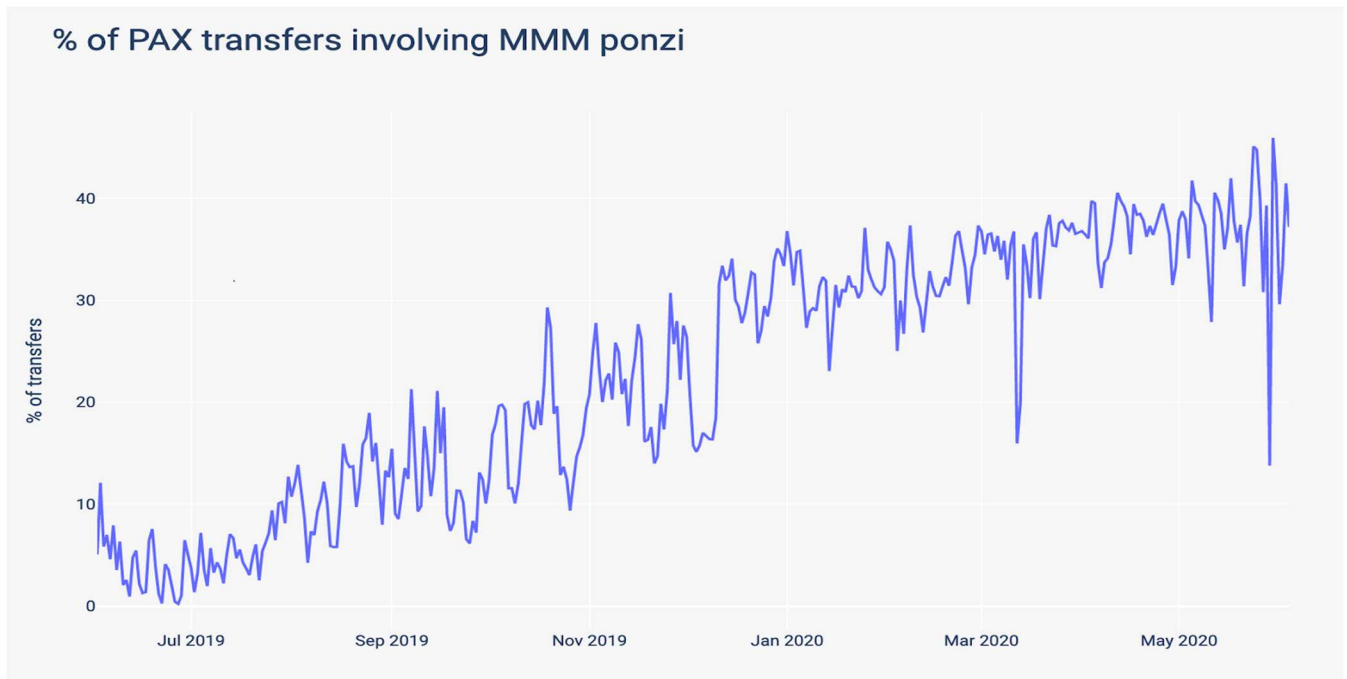


Note : We have excluded USDK as 94% of it's holding are \$0.5 to \$1.

Here, Paxos appear to have a broad and active userbase but looking into it further, the top transactors on Paxos leads to an interesting discovery. The two most active accounts on Paxos are linked to MMMBSC, which is a ponzi scheme that underwent an exponential growth activity in the past year.



Nowadays, more than 40% of Paxos is directly linked to MMMBSC.



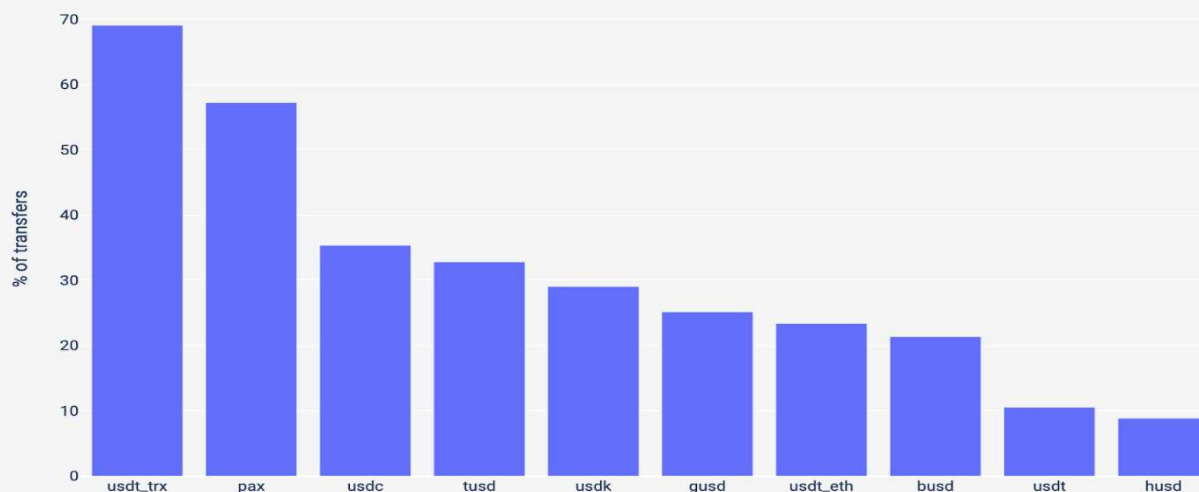
Another interesting anomaly is that the most active Tether on Tron accounts are “Dividend” payouts. In some days, this was responsible for 90+% of Tether on Tron transfers.



TRADE VALUE DISTRIBUTION

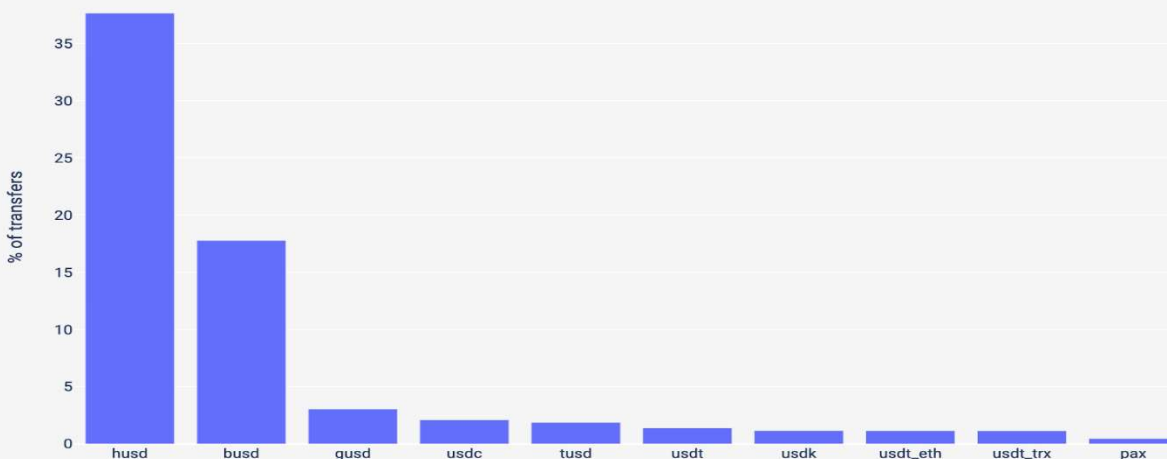
If stable coins are truly used as a means of payment for retail users, it is very clear that majority of transfer's value falls below \$100 as PayPal's average transaction value in Quarter 1 2020 was around \$58). So, if one sees stable coins as liquidity rails for traders, the majority of payments should be of high value i.e., in our case \$100,000 as the lower limit.

% of transfers below \$100 since 2020-01-01



It turns out that both visions are correct, depending on which stable coin we look into. Some stable coins like Paxos and Tether on Tron see a lot of retail-like transactions, might be due to the presence of MMM and other dividend schemes on these assets. Other stable coins like HUSD and BinanceUSD have a large share of payments over \$100,000.

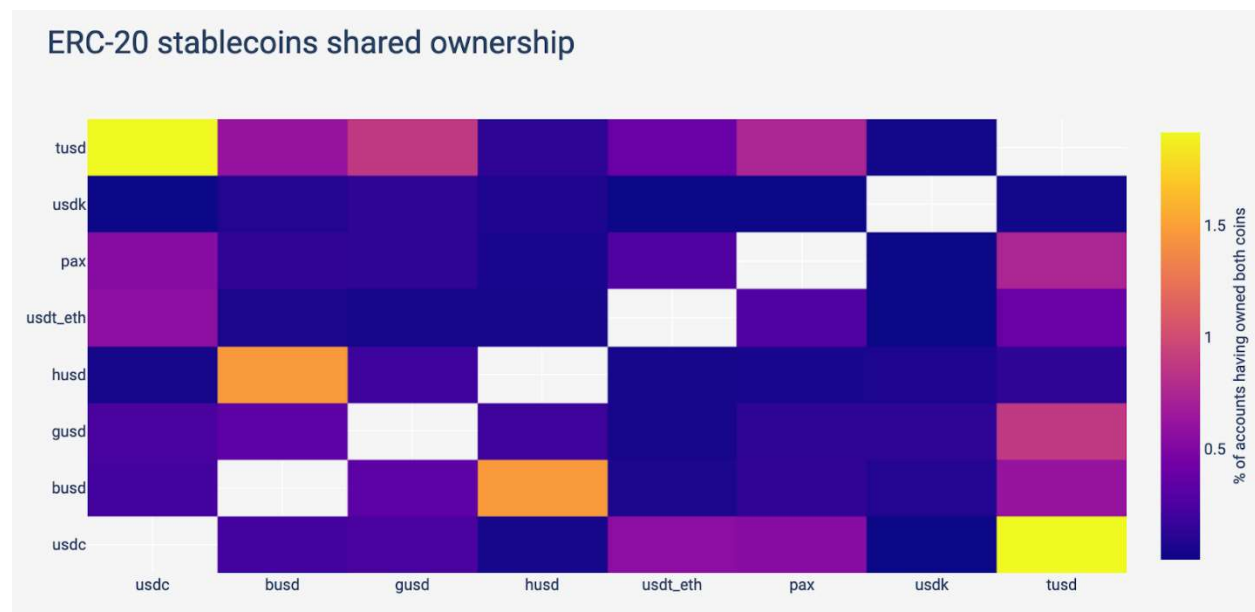
% of transfers greater than \$100k since 2020-01-01



SHARED OWNERSHIP

Are similar stable coins owned by the same accounts?

Due to the anonymity of blockchain network, it's only possible to answer this question by analyzing stable coins that use the same network. For example, stable coins like PAX and USDC, which are both issued on the Ethereum blockchain. However, an address owning Tether on Tron cannot own USDC on Ethereum, as the addresses are not consistent across blockchains. As the great majority of stable coins are issued as Ethereum (ERC-20) tokens, this is the asset on which this analysis has been run:



Things to note from the chart:

- Two pairs of assets stick out as being owned jointly by single charts accounts: TrueUSD with USDC and HUSD with Binance USD (BUSD).
- TrueUSD owners seem to be more likely to own other stable coins.

CONCLUSION

Even though stable coins are often bunched together and treated as a whole but by looking deeply at network data, we can better understand how they differ. Even when issued by the same entity i.e. Tether, stable coins on different networks and smart contracts have varying outcomes in supply and activity distribution.

REFERENCES

<https://coinmarketcap.com/> for providing valuable data regarding stable coins and other cryptocurrencies.

<https://www.coingecko.com/en/stablecoins> for information on stable coins.

<https://www.blockchain.com/> for information on stable coin mechanism.

<https://www.coinbureau.com/> for providing insights on stable coins

<http://www.ijsrp.org/ijsrp-paper-format.php> for the template.