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# USD PLUS WHITE PAPER



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# **USD PLUS WHITEPAPER 2024**

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## **1.0. Introduction**

There exists a vast array of assets in the world which people freely choose as a store-of-value, a transactional medium, or an investment. We believe the USD Plus blockchain is a better technology for transacting, storing, and accounting for these assets. Most estimates measure global wealth around 250 trillion dollars with much of that being held by banks or similar financial institutions. The migration of these assets onto the USD plus blockchain represents a proportionally large opportunity.

Bitcoin was created as "an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party. Bitcoin created a new class of digital currency, a decentralized digital currency or cryptocurrency".

Some of the primary advantages of cryptocurrencies are: low transaction costs, international borderless transferability and convertibility, trustless ownership and exchange, pseudo-anonymity, real-time transparency, and immunity from legacy banking system problems . Common explanations for the current limited mainstream use of cryptocurrencies include volatile price swings, inadequate mass-market understanding of the technology, and insufficient ease-of-use for non-technical users.

Further, almost all types of existing financial institutions, payment providers, etc, which allow you to hold fiat value (or other assets) subsequently provide a similar service. In this white paper we focus on applications wherein the fiat value is stored and transmitted with software that is open-source, cryptographically secure, and uses distributed ledger technology, i.e. a true cryptocurrency.

### **1.1. Our implementation has the following advantages over other fiat-pegged cryptocurrencies:**

- USD Plus (USDP) and USD Token are the UAE based first stable coin of USD and AED.
- USD Plus exist on the USD plus blockchain rather than a less developed/tested "altcoin" blockchain within closed-source software running on centralized, private databases.

- USD Plus can be used just like bitcoins, i.e. in a p2p, pseudo-anonymous, decentralized, cryptographically secure environment.
- USD Plus can be integrated with merchants, exchanges, and wallets just as easily as Bitcoin or any other cryptocurrencies can be integrated.
- USD Plus inherits the properties of the USDP Layer protocol which include: a decentralized exchange, browser-based, open-source, wallet encryption; Bitcoin-based transparency, accountability, multi-party security and reporting functions.
- USD Plus Limited employs a simple but effective approach for conducting Proof of Reserves which significantly reduces our counterparty risk as the custodian of the reserve assets.
- USD Plus issuance or redemption will not face any pricing or liquidity constraints. Users can buy or sell as many USDP as they want, quickly, and with very low fees.
- USD Plus will not face any market risks such as Black Swan events, liquidity crunches etc. as reserves are maintained in a one-to-one ratio rather than relying on market forces.
- USD Plus is a UAE based digital dollar and digital AED.

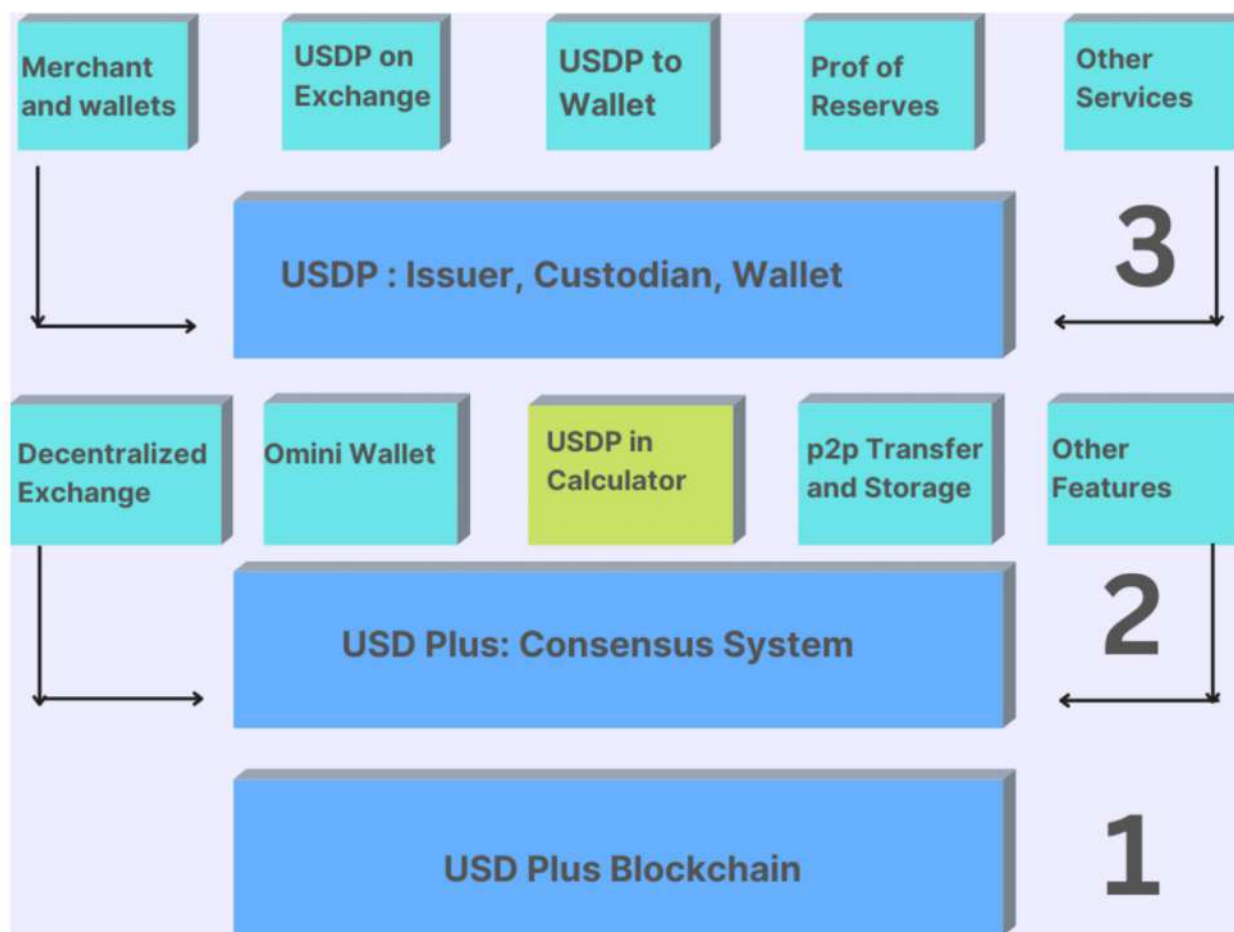
## **2.0. Technology Stack and Processes**

Each USDP issued into circulation will be backed in a one-to-one ratio with the equivalent amount of corresponding fiat currency held in reserves by United Arab Emirates based USD PLUS. As the custodian of the backing asset we are acting as a trusted third party responsible for that asset.

## **3.0. USDP Technology Stack**

The stack has 3 layers, and numerous features, best understood via a diagram





### 3.2. Here is a review of each layer.

1) The first layer is the USD Plus blockchain. The USDP transactional ledger is embedded in the USD Plus blockchain as meta-data via the embedded consensus system.

2) The second layer is the USD Plus Layer protocol. USDP is a foundational technology

a) Grant (create) and revoke (destroy) digital tokens represented as meta-data embedded in the USD Plus blockchain; in this case, fiat-pegged digital tokens, USDP.

b) Track and report the circulation of USD PLUS via [usdpplus.live](https://usdpplus.live)

c) Enable users to transact and store USDP and other assets/tokens in:

i) p2p, pseudo-anonymous, cryptographically secure environment.

ii) open-source, browser-based, encrypted web wallet: USDP Wallet.

multi-signature and offline cold storage-supporting system.

3) The third layer is USD PLUS, our business entity primarily responsible for:

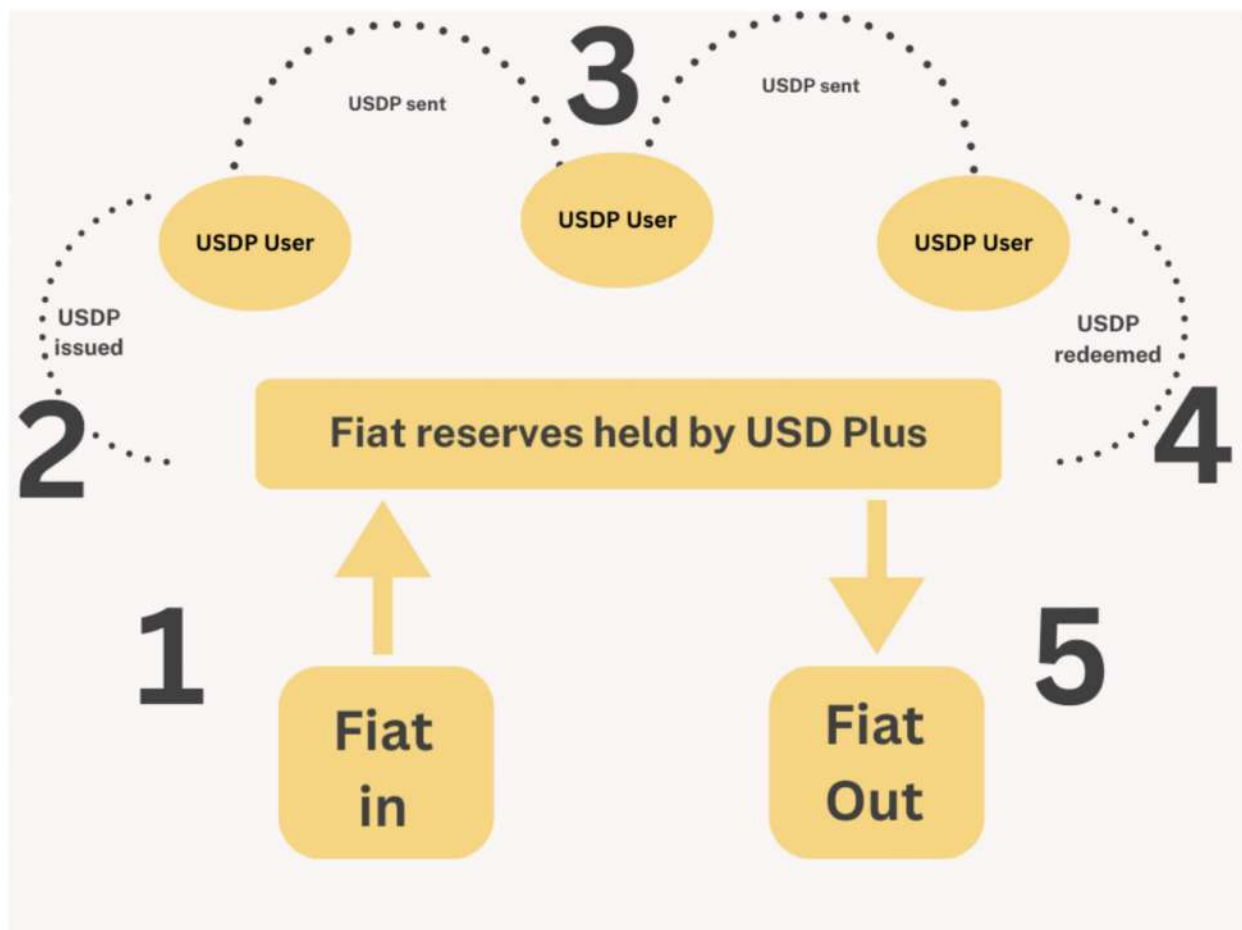
a) Accepting fiat deposits and issuing the corresponding USDP.

b) Sending fiat withdrawals and revoking the corresponding USDP.

- c) Custody of the fiat reserves that back all USDP in circulation.
- d) Publicly reporting Proof of Reserves and other audit results.
- e) Initiating and managing integrations with existing USDP/blockchain wallets, exchanges, and merchants.
- f) Operating USDP a web-wallet that allows users to send, receive, store, and convert. USDP conveniently.

## 4.0 Flow of Funds Process

There are five steps in a life cycle in USDP, best understood via a diagram.



### 4.1. Here is a review of each step.

Step 1: The user deposits fiat currency into a USD Plus bank account.

Step 2: USD Plus generates and credits the user's USDP account. USDP enters circulation. Amount of fiat currency deposited by user amount of USDP issued to user (i.e., 10k USD deposited = 10k USDP issued).

Step 3: Users transact with USDP". The user can transfer, exchange, and store USDP via a p2p open-source, pseudo-anonymous, Bitcoin-based platform.

Step 4: The user deposits USDP with USD Plus for redemption into fiat currency.

Step 5: USD Plus destroys the USDP and sends fiat currency to the user's bank account.

Users can obtain USDP outside of the aforementioned process via an exchange or another individual. Once a USDP enters circulation, it can be traded freely between any business or individual. For example, users can purchase USDP from Bitfinex, with more exchanges to follow soon.

The main concept to be conveyed by the Flow of Funds diagram is that USD Plus is the only party who can issue USDP into circulation (create them) or take them out of circulation (destroy them). This is the main process by which the system solvency is maintained.

## **5.0. Proof of Reserves Process**

This makes the network faster and prevents from choking. To increase the higher throughput, the asynchronous BFT helps with more transactions. To mature the transactions faster, DAG with pBFT helps increase the transactions finality. Ultimately, this approach helps reduce the transaction fee.

USD Plus DAG to achieve the practical BFT (Byzantine Fault Tolerance) which helps in communicating the nodes to achieve the PoS easily. USD Plus makes the asynchronous calls between the nodes so that while the consensus is being achieved for a particular block, the node can carry on with the new work.



- USD Plus issues all USDP via the USD Plus Layer protocol. USDP operates on top of the USD Plus blockchain, and therefore all issued, redeemed, and existing USDP, including transactional history, are publicly auditable via the tools provided at <https://www.dex-tools.io/app/en/bnb/pairexplorer/0xe2d5493bb7f215b0bac03342509a5fca4889fa51?t=1724829313353>

- Here is a link:

<https://www.dex-tools.io/app/en/bnb/pairexplorer/0xe2d5493bb7f215b0bac03342509a5fca4889fa51?t=1724829313353>

- Let the total number of USDP issued under this asset ID be denoted as  $DXBUSD_{issue}$ .
- Let the total number of USDP redeemed under this asset ID be denoted as  $DXBUSD_{redeem}$ .
- Let the total number of USDP in circulation at any time be denoted as USDP.

■  $DXBUSD = DXBUSD_{issue} - DXBUSD_{redeem}$

■ USDP = "Total Property Tokens" @

<https://www.dex-tools.io/app/en/bnb/pairexplorer/0xe2d5493bb7f215b0bac03342509a5fca4889fa51?t=1724829313353>

- USD Plus has a bank account that will receive and send fiat currency to users who purchase/redeem tethers directly with us.
- Let the total amount deposited into this account be denoted as  $USDP_{depo}$ .
- Let the total amount withdrawn from this account be denoted as  $USDP_{withd}$ .
- Let the dollar balance of this bank account be denoted as USD.

■  $USDP = USDP_{depo} - USDP_{withd}$

- Each USDP issued will be backed by the equivalent amount of currency unit (one USDP equals one dollar). By combining the above crypto and fiat accounting processes, we conclude the "Solvency Equation" for the USDP System.
- The solvency Equation is simply  $DXBUSD = USDP$ .
- Every USDP issued or redeemed, as publicly recorded by the Bitcoin blockchain will correspond to a deposit or withdrawal of funds from the bank account.
- The provability of  $DXBUSD$  relies on the Bitcoin blockchain, as discussed previously.
- The provability of USDP will rely on several processes: We publish the bank account balance on our website's Transparency page.
- Professional auditors will regularly verify, sign, and publish our underlying bank balance and financial transfer statement.

## 6.0. Implementation Weaknesses



We understand that our implementation doesn't immediately create a fully trustless cryptocurrency system. Mainly because users must trust USD Plus and our corresponding legacy banking institution to be the custodians of the reserve assets. However, almost all exchanges and wallets (assuming they hold USDP/fiats) are subject to the same weaknesses. Users of these services are already subject to these risks.

#### **6.1 Here is a summary of the weaknesses in our approach:**

- We could go bankrupt.
- Our bank could go insolvent.
- Our bank could freeze or confiscate the funds.
- We could abscond with the reserve funds.

Observe that almost all digital currency exchanges and wallets (assuming they hold USD/fiat) already face many of these challenges. Therefore, users of these services are already subject to these risks. Below we describe how each of these concerns is being addressed.

We could go bankrupt. In this case, the business entity USD Plus would go bankrupt, but client funds would be safe, and subsequently, all USDP will remain redeemable. Most security breaches on USDP businesses have targeted cryptocurrencies rather than bank accounts. Since all USDP exist on the USD Plus blockchain, they can be stored by individuals directly through securing their own private keys.

Our bank could go insolvent. This is a risk faced by all users of the legacy financial system and by all exchange operators. USD Plus currently has accounts with Emirates NBD and ADCB bank in Dubai, both of whom are aware and confident that the USDP business model is acceptable. Additional banking partners are being established in other jurisdictions to further mitigate this concern.

Our bank could freeze or confiscate the funds. Our banks are aware of the nature of Bitcoin and are accepting of Bitcoin businesses. They also provide banking services to some of the largest Bitcoin exchanges globally. The KYC/AML processes we follow are also used by the other digital currency exchanges they currently bank. They have assured us we are in full compliance.

We could abscond with the reserve assets. The corporate charter is public, as are the business owners names, locations, and reputations. Ownership of the account is legally bound to the corporate charter. Any transfers in or out of the bank account will have the associated traces and are bound by rigid internal policies.

Re-centralization of risk to a single point of failure We have some ideas on how to overcome this, and we'll be sharing them in upcoming blog and product updates. There are many ways to tackle this problem. For now, this initial implementation gets us on the right track to realize these innovations in the following versions.

By leveraging the platforms we have chosen, we have reduced the centralization risk to one singular responsibility: the creation and redemption of tokens. All other aspects of the system are decentralized.

## **7.0. Main Applications**

In this section, we'll summarize and discuss the main applications of USDP across the USD Plus/blockchain ecosystem and for other consumers globally. We break up the beneficiaries into three user groups: exchanges, individuals, and merchants.

### **7.1. The main benefits, applicable to all groups:**

- Properties of USD Plus bestowed upon other asset classes
- Less volatile, familiar unit of account
- The world's assets migrate to the USD Plus blockchain.

## **8.0. For Exchanges**

Exchange operators understand that accepting fiat deposits and withdrawals using legacy financial systems can be complicated, risky, slow, and expensive. Some of these issues include:

- Exchange operators understand that accepting fiat deposits and withdrawals using legacy financial systems can be complicated, risky, slow, and expensive. Some of these issues include: Identifying the right payment providers for your exchange
- irreversible transactions, fraud protection, lowest fees, etc.
- Integrating the platform with banks that have no APIs
- Liaising with these banks to coordinate compliance, security, and to build trust
- Prohibitive costs for small value transfers
- 3-7 days for international wire transfers to clear



- Poor and unfavorable currency conversion fees

By offering USDP, an exchange can relieve themselves of the above complications and gain additional benefits, such as:

- Accept crypto-fiats as deposit/withdrawal/storage methods rather than using a legacy bank or payment provider.
  - Allows users to move fiat in and out of exchange more freely, quickly, and cheaply
- Outsource fiat custodial risk to USD Plus, just manage cryptos.
- Secure customer assets purely through accepted cryptographic processes.
  - Multi-signature security, cold and hot wallets, HD wallets, etc.
  - Conduct audits easier and more securely in a purely crypto environment.
- Anything one can do with USD Plus as an exchange can be done with USDP.

Exchange users know how risky it can be to hold fiat currencies on an exchange. With insolvency events, it can be quite dangerous. As mentioned previously, we believe that using USDP exposes exchange users to less counterparty risk than continually holding fiat on exchanges. Additionally, there are other benefits to holding USD plus, explained in the next section

## **9.0. For Individuals**

There are many types of individual Bitcoin users in the world today. From traders looking to earn profits daily; to long-term investors looking to store their Bitcoins securely; to tech-savvy shoppers looking to avoid credit card fees or maintain their privacy; to philosophical users looking to change the world; to those looking to remit payments globally more effectively; to those in third-world countries looking for access to financial services for the first time; to developers looking to create new technologies to all those who have found many uses for Bitcoin. For each of these individuals, we believe USDP are useful in similar ways, like:

- Transact in USDP/fiat value, pseudo-anonymously, without any middlemen/intermediaries.
- Cold store USDP/fiat value by securing one's own private keys.
- Avoid the risk of storing fiat on exchanges—move crypto-fiat in and out of exchanges easily.
- Avoid having to open a fiat bank account to store fiat value.
- Easily enhance applications that work with bitcoin to also support USDP.



## **10.0. For Merchants**

Merchants want to focus on their business, not on payments. The lack of global, inexpensive, ubiquitous payment solutions continues to plague merchants around the world, both large and small. Merchants deserve more. Here are some of the ways USDP can help them:

- Avoid conversion from USDP to USD/fiat and associated fees and processes.
- Avoid conversion from USDP to USD/fiat and associated fees and processes.
- Provide novel services because of fiat-crypto features
  - Microtipping, gift cards, and more

Anything one can do with Bitcoin as a merchant, one can also do with Tether.

## **11.0. Future Innovations**

### **12.0. Multi-signature and smart contracts**

### **13.0. Proof of solvency innovations**

## **14.0. Conclusion**

USDP constitutes the first Bitcoin-based fiat-pegged cryptocurrencies in existence today. USDP is based on the USD Plus blockchain, the most secure and well-tested blockchain and public ledger in existence. USDP are fully reserved in a one-to-one ratio, completely independent of market forces, pricing, or liquidity constraints. USDP has a simple and reliable Proof of Reserves implementation and undergoes regular professional audits. Our underlying banking relationships, compliance, and legal structure provide a secure foundation for us to be the custodian of reserve assets and issuer of USDP. Our team is composed of experienced and respected entrepreneurs from the USDP ecosystem and beyond.

We are focused on arranging integrations with existing businesses in the cryptocurrency space. Businesses like exchanges, wallets, merchants, and others. We're already integrated with Bitfinex, Holy Transaction, Omni Wallet, Poloniex, C-CEX, and more to come. Please reach out to us to find out more.

## **15.0. Appendix**

## **16.0. Audit Flaws: Exchanges and Wallets**

Here is a summary of the current flaws found in technology-based exchange and wallet audits.

In the Merkle tree app

Here is a summary of the current flaws found in technology-based exchange and wallet audits. roach, users must manually report that their balances (user's leaf) have been correctly incorporated in the liability declaration of the exchange (the Merkle hash of the exchange's database of user balances). This proposed solution works if enough users verify that their account was included in the tree, and in a case where their account is not included, this instance would be reported. One potential risk is that an exchange database owner could produce a hash that is not the true representation of the database at all; it hashes an incomplete database, which would reduce its apparent liabilities to customers, making them appear solvent to a verifying party. Here are some scenarios where a fraudulent exchange would exclude accounts and

- Bitdust Accounts Inactive or low-activity accounts would lower the chance that an uninterested user would check or report inconsistencies. In some cases, these long-tail accounts could represent a significant percentage of the exchange's n liabilities.

- "Colluding Whales Attack: There is evidence that large Bitcoin traders are operating on various exchanges and moving markets significantly. Such traders need to have capital reserves at the largest exchanges to quickly execute orders. Often, traders choose exchanges that they trust." In this way, they can be assured that should a hack or liquidity issue arise, they have priority to get their money out. In this case, the exchange and trade could collude to remove the whale account balance from the database before it's hashed.

- Key Rental Attack: To pass the audit, a malicious exchange could rent the private keys to bitcoins they do not own. This would make them appear solvent by increasing their assets without any acknowledgment that those funds were loaned to them. Likewise, they could "borrow" fiat currency to do the same.

- There are more attacks not discussed here.



Reaching Statistical Significance (reporting completeness): Even outside of these three attack vectors, a database that has been manipulated may never be detected if a sufficient number of users are not validating balances. The probability of getting 100% of the users to verify balances is likely zero, even with proper incentivization structure for users to verify their balances. Therefore, auditors would need statistical tools to make statements about the validity of an exchange's database based on sampling frequency, size, and other properties.

Currently, users have no way to receive compensation by legal means in case something goes wrong with the exchange. For example, when Mt. Gox closed operations, many users might not have independently recorded their account balances (print screens, signed messages to themselves, etc.) in a way that could conclusively prove to law enforcement that this exchange's 1.0.U's actually existed. Such users are at the mercy of the exchange to somehow publish a record of that hash tree or original database.

The proposed structure in which these audits would be performed still contains some subtle but important flaws. In particular, the data reporting (hash tree) on the institution's website gives no guarantee at all to users, as a malicious exchange could publish different states/balances to different groups of users or retroactively change the state. Thus, it is fundamental to publish this data through a secure broadcast channel, e.g., the USD Plus blockchain.

Privacy is a barrier to entry for the adoption of an automated/open auditing system. While some progress has been made towards better privacy, there is no perfect solution yet. Further, to build up an accurate user-verified liability space, these users will have to report account balances with the exchange and Bitcoin addresses. Some users likely would not report this information regardless of the incentive; therefore, providing cryptographically secure privacy while obtaining the reporting goal is paramount.

Time Series: the Merkle tree hash is a single snapshot of the database at a single point in time. Not having a somewhat continuous time series of the database opens significant attack vectors. Additionally, a time series of user-reported information would also be required for piecing together the history of any reported incidents of fraud.



Trusted Third Parties: All of the current exchange audits have relied on some "reputable" trusted third party to make some type of verification. In the Coinbase audit, that was Andreas Antonopoulos; in the Kraken audit, that was Stefan Thomas. If we absolutely must rely on a trusted third party, then some audit standards and procedures should ensure these weaknesses are fortified.

## **17.0. Limitations of Existing Fiat-Pegging Systems**

Here is a list of some of the common drawbacks and limitations of the existing fiat-pegging system.

- The systems are based on closed-source software, running on private, centralized databases fundamentally no different than Paypal or any other existing mass market retail/institutional asset trading/transfer/storage system.
  - Decentralized systems that rely on altcoin blockchains that haven't been stress-tested, developed, or reviewed as closely as other blockchains, like Bitcoin.
  - Pegging processes that rely on hedging derivative meta-assets, efficient market theory, or collateralization of the underlying asset, wherein liquidity, transferability, security, and other issues can exist.
- Lack of transparency and audits for the custodian, either crypto, fiat, or relating to their own internal ledgers (same as closed source and centralized databases).
- Reliance on legacy banking systems and trusted third parties (bank account owners) as a transfer and settlement mechanism for reserve assets.

## **18.0. Market Risk Examples**

In the collateralization method, market risk exists because the price of the asset being used as collateral can move in an adverse direction to the price of the asset it's backing or pegging. This would cause the total value of the collateral to become less than the total value of the issued asset and make the system insolvent. This risk is mitigated by the custodian closing the position before this happens; that is, when the collateral price equals the pegged asset price, then the collateral is liquidated (sold on the open market) and the position is closed. A great approach with merit and used in many liquid markets across the traditional banking and financial markets. However, as we saw from the global financial crisis, situations can arise in which the acceleration of such events causes a "liquidity crunch," and thus the collateral is unable to be liquidated fast enough to meet trading obligations, subsequently creating losses. With the cryptocurrency markets being so small and volatile, this type of event is much more likely. Additionally, the overall approach suffers from other liquidity and pricing constraints since there must be a sufficient supply of users posting collateral for the creation of the pegged assets to exist in the first place.

In the derivatives approach, the price of the asset is pegged through entering one of several derivatives strategies, such as swap strategies, covered and naked options strategies, and various futures and forwards strategies. Each strategy has their own strengths and weaknesses, the discussion of which we won't engage in here. To summarize, each of these pegging processes themselves has similar "market risk" characteristics as the aforementioned collateralization method. It should be noted that the two methods are not mutually exclusive and are often paired in a specific trading, hedging, or risk management function at legacy system financial institutions.

Finally, understand that we believe some combination of the above approaches may become a secure, reliable, and generally risk-free process for backing/pegging assets; however, at this point in time, this is not a direction we feel is feasible to take to ensure liquidity and price stability. Further, we believe that a reserve-based approach will always be in existence and complement these other approaches as the entire industry grows. As advances in technology continue, we will evaluate and incorporate any benefits available while maintaining the guarantee of 100% redeem ability.

## **19.0. Legal and Compliance**

USD PLUS ("USDP") is a company incorporated pursuant to the UAE Companies Ordinance. It is wholly owned by USDP Holdings, a BVI business company incorporated pursuant to the BVI Business Companies , .

USDP is registered as a Money Services Business with the Financial Crimes Enforcement Network of the U.S. Department of the Treasury (MSB Registration Number\_\_\_\_\_). USDP is establishing a relationship with a U.S. financial institution for purposes of better servicing USDP users in the United States.

Through these and other measures, USDP is undertaking customer due diligence, record-keeping, and reporting procedures consistent with U.S. law and with the Dubai Anti-Money Laundering and Counter-Terrorist Financing (Financial Institutions) Ordinance.

USDP Limited currently has accounts with Emirates NBD bank and ADCB bank in Dubai both of whom are aware and confident that the USDP business model is acceptable.

USDP banks are satisfied with our processes and also satisfied that our business operates in accordance with Dubai off-shore banking regulations, as all of the banks had been requested to check this with their own legal, compliance, and head office before opening accounts (also at our own request). It was our goal from the beginning to have a compliant operation and to provide the maximum level of comfort to our banking partners here. In addition, these banks have and are working with other USDP -based businesses.

## **20.0. Glossary of Terms**

Digital currency: As defined by [http://en.wikipedia.org/wiki/Digital\\_currency](http://en.wikipedia.org/wiki/Digital_currency)

Cryptocurrency or decentralized digital currency: any type of cryptocurrency that is open-source, cryptographically secure, and uses a distributed ledger. See: <http://en.wikipedia.org/wiki/Cryptocurrency>

Real-world currency, fiat currency, or national/sovereign currency: all types of currency that are not cryptocurrencies as defined above.



Cryptocurrency system: A collection of software and processes primarily created to enable the existence of a cryptocurrency.

Legacy financial system: any financial system that is not a cryptocurrency system.

Utility-backed digital tokens, a.k.a. Dapps, are decentralized digital tokens whose value is derived from the usefulness of their application rather than just being a value transfer system.

Asset-backed/pegged cryptocurrency: Any cryptocurrency whose price is pegged to a real-world asset, i.e., its not a "utility-backed" cryptocurrency.

USDP: a single unit (or multiple units) of fiat-pegged cryptocurrency issued by USD PLUS

USDP or DXBUSD: a single unit of crypto-USD issued by USD PLUS

DXBUSD: collective amount of DXBUSD in circulation at any point in time.

USDP System: collectively refers to all processes and technologies that enable USDP to exist.

Proof of Reserves: The process by which the issuer of any asset-backed decentralized digital token cryptographically or mathematically proves that all tokens that have been issued are fully reserved and backed by the underlying asset.

## **21.0. Reference**

- <https://bscscan.com/token/0x8d73d7baf902afb89b234ec480471c337580a68b>
- <https://coinbrain.com/coins/bnb0x8D73D7bAf902aFB89b234EC480471c337580a68b>



**THANK YOU**



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