

### A Real-Time Audited - USD Asset-Backed / USDstablecoins

Smart contract address: 0xc4f392B480A16Ce3A0bCD20De78c885DCA5aFbd0

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# ABSTRACT

USDstablecoin (symbol: USDST) is a fiat-backed stablecoin issued by Wallex Trust, built on the Ethereum network according to the ERC20 standard for tokens.

USDstablecoin will utilize a proven centralized model to fully back every token issued with an equivalent unit of real currency (US dollars) in a real-time audited and transparent reserve managed by Wallex Trust, the central issuer of USDST tokens, as well as our fiduciary custodial partners. In addition to regular third-party audits, token issuance/redemption transactions are recorded on-chain. The existence of a physical, real-time audited and redeemable USD reserve will effectively peg the market value of USDST tokens to the real currency Value of the 1USD in USD.

Wallex Trust, DOC USA info@usdst.io

# **EXECUTIVE SUMMARY**

Stablecoins are digital units of value that are not a form of any specific currency (or basket thereof) but rather, by relying on a set of stabilisation tools, try to minimise fluctuations in their price in such currencies. Stablecoins claim to stabilise major currencies directly in the market of crypto-assets, whose prices are inherently volatile due to the lack of any liable issuer, and therefore across the broader economy.

Different types of stablecoin initiatives can be identified when following the criteria given to characterise crypto-assets. These criteria are, as follows: (i) the existence/absence of an issuer that is responsible for fulfilling any attached claim; (ii) the decentralisation/centralisation of responsibilities over the stablecoin initiative; and (iii) what underpins the value of a stablecoin and its stability in the currency of reference.

The stabilisation mechanism at the core of a stablecoin initiative is critical to determining whether the units issued can maintain a stable value or not. Different stabilisation mechanisms may either require the intervention of accountable institutions, in the role of issuer and custodian or may delegate such tasks to stablecoin users. For further expansion, stablecoins can be described as being:

- backed by funds, which an issuer or custodian needs to hold for safekeeping, implying a commitment to their full redeemability (referred to hereinafter as "tokenised funds");
- backed by other traditional asset classes that require a custodian for their safekeeping and are in the possession of the issuer only as long as the user does not redeem the stablecoins, or what is left of them in the case of default ("off-chain collateralised stablecoins");
- backed by assets, typically crypto-assets, which can be recorded in a decentralised manner and do not need either an issuer or a custodian to satisfy any claim ("on-chain collateralised stablecoins"); and
- backed by users' expectations about the future purchasing power of their holdings, which does not need the custody of any underlying asset, and whose operation is totally decentralised ("algorithmic stablecoins").

Different types of stablecoins feature a trade-off between the level of innovation involved in their stabilization mechanism and the stability of their value in the currency of reference. On the one hand, the least innovative stablecoin initiatives focus on the mere tokenization of currency units: relying on the traditional systems for the safekeeping of funds, which are in the form of either electronic money or scriptural money, and put use distributed ledger

technology (DLT) to issue their mere representations in the form of claims on the entity in charge. On the other hand, currently, the most innovative initiatives do not keep to the promise of maintaining a stable value.

In line with this, the value of tokenized funds may be truly stable (in terms of the currency in which funds are denominated), provided that the users trust the entity backing the stablecoin initiative, therefore notwithstanding the lack of clear, applicable regulation which may expose users to fraudulent behaviour. Tokenized funds do not involve the use of a new type of assets, but instead represent existing currency units on a distributed ledger, thus they mirror either the traditional electronic money approach to retail payments or the pre-outsourcing companies payment system. Nevertheless, tokenized funds initiatives may present challenges that should be controlled by the means of an appropriate regulatory framework.

Collateralised stablecoins can have a stable price only to the extent that the volatility of collateral against which they are issued is catered for by the margins applied. While off-chain collateralised stablecoins aim to tokenise traditional assets on a distributed ledger, on-chain collateralised stablecoins endeavour to turn highly volatile collateral in the form of crypto-assets into a stable asset, typically by providing economic incentives to their potential holders.

Off-chain collateralised stablecoin initiatives require accountable custodians and issuers for both the safekeeping of collateral and to allow its redemption. These stablecoins are uncommon since they address the volatility of underlying collateral and bring little innovation, owing to the need to use the typical intermediated financial systems.

On-chain collateralised stablecoin initiatives can work without the intervention of any accountable party. To the extent that these initiatives are backed by crypto-assets, collateral is recorded directly on a distributed ledger and in the custody of the network participant. Whereas an issuer could take responsibility for overseeing the rules of such initiatives and liquidate collateral on request, their operation is generally decentralised.

Algorithmic stablecoins have not yet proven capable of withstanding market shocks and maintaining a stable value in the currency of reference. Such stablecoin initiatives do not involve the intervention of any accountable party and can be seen as an evolution of crypto-assets. They offer the greatest level of innovation among stablecoin types, with some initiatives claiming to be able to replace central banks, although no successful track record is available to date to support such claims.

The total market value of stablecoins soared over the last year, mostly owing to the growth of tokenised funds initiatives. Their future role in the crypto-asset market and broader economy, however, is uncertain. The total value of stablecoins almost tripled from  $\leq 1.5$  billion in January 2018 to more than  $\leq 4.3$  billion in July 2019, with tokenised funds initiatives accounting for more than 97% of the market. Several obstacles related to the lack of accountable institutions hinder the usability of collateralised and algorithmic stablecoins beyond a core user base motivated by a strong preference for privacy and an aversion to the scrutiny of trusted institutions. ECB Occasional Paper Series No 230 / August 2019

While the use of new technology is often mistaken for the introduction of a new asset class, some stablecoins are truly part of the new phenomenon of crypto-assets, with significant uncertainties relating to their governance and regulatory treatment. Uptake in the usage of any stablecoin requires transparent governance, including procedures to update the smart contracts at the core of the initiative and a cyber-security framework. Stablecoin initiatives with a clear governance framework could be subject to much warranted regulatory scrutiny and recognition. This may promote uptake in both the crypto-asset market and the broader economy, leveraging distributed ledger technology (DLT) while ceasing to target users who are interested in participating in an unregulated ecosystem.

## **INTRODUCTION**

There are a vast number of different assets that people may use free to keep value. Now there is the value of the traditional environment or investment, but we believe that today the blockchain and cryptocurrencies are the EVOLUTION and the best solution for the management, storage and accounting of these assets.

There are many different assumptions and analyses published by that outsourcing companies. The data given by such sources presents the global wealth average to be an estimate of 312 trillion dollars. Consequently, most of these assets are owned by banks or similar of such financial institutions, and present in most cases without motion, thereby causing unrest and issues to acknowledge.

The modern traditional financial system presents itself with a lack of updates and extreme vulnerabilities. Banks, as well as the state, do not want to engage with blockchain technology on a global level, due to the fact that officials will have it difficult to hide corruption schemes and various backstairs political methods of struggle with public opinion, justice democracy, and more.

Given the foregoing, we may conclude that the inclusion of the world's assets on the blockchain is a necessity and has enormous benefits that will appear in the process of this integration. It was not too long ago that cryptocurrency was introduced as 'an electronic payment system based on cryptographic proof', therefore allowing any two people to interact directly with each other without the use of a trusted third party, and thus eliminating the need to entrust your money to a central authority.

The very first chosen cryptocurrency is that bitcoin, it was created by an unknown developer or team of developers under the pseudonym "Satoshi Nakamoto". Satoshi created not only a new class of decentralized, digital currency or cryptocurrency but in general, through technology introduced the world to a new financial sector which, has been widely used and studied. Now it is not possible for any state, self-respecting finance company nor any keeping up to date organization to ignore the inevitable.

Cryptocurrencies present a vast number of advantages such of which are; low transaction costs, global payments, easy conversion and wide distribution, pseudo-anonymity, asset ownership and exchange, real-time transactions transparency and immunity to common problems which occur in the traditional banking system.

On the other hand, the use and possession of cryptocurrencies may present difficulties to nontechnical users. Furthermore, if one wishes to use cryptocurrencies in their daily life to pay for petty purchases, the attempts may portray to be less profitable and riskier due to factors such as the uncontrolled cryptocurrencies mining process, speculations by large traders and holders of large market shares engrossing from the whole component of capitalization (a total capitalization of about \$ 300 billion). In addition to this, speculators theorize that there is an approximate \$50 billion loss of bitcoins. Based on the factors mentioned above, there is often more of a misunderstanding or inadequate information of the market behaviour on technology, and therefore often a lack of usability of non-technical users. As a result, this often leads to uncertainty making the market drop at a pace that no company has ever experienced on traditional stock exchanges.

In this whitepaper, we focus on how the stablecoin created to parallel between the concept of fiat and cryptocurrency can upgrade the financial system and a new economy. In accordance, assets will be stored and transmitted using software built on the Ethereum network according to the ERC20 standard for tokens, cryptographically secure, and the technology use of distributed ledgers, as the true value of the cryptocurrency.

We offer the solution to all problems related to the cryptocurrency volatility through linking "USDstablecoin" to the fiat.

USDstablecoin is based on the blockchain protocol code already released in the first block and moved to cold storage wallet, which is administered by the independent Board analysts and consultants. After that, each USDstablecoin exists as a cryptocurrency and is under constant audit of the analytical Department through its advanced technology provides a real-time audited system thanks to the connection between the smart contract and the segregated trust custodian account.

## STABLECOIN BUSINESS MODEL SCENARIO

BitShares/BitUSD: The original BitShares/BitUSD whitepaper can be found. From a high level, BitUSD is a stable cryptocurrency that is issued by backing its value with collaterals. BitShares is the network's base token used for its financial contracts. To mint a new BitUSD, someone has to lock up at least an equivalent value of BitShares. This, along with a forced liquidation mechanism, creates the peg for BitUSD. When the market value of BitUSD goes over \$1.00, users are incentivized to mint new BitUSD, and when the value goes under \$1.00, users can redeem BitUSD for the underlying BitShares.

Although elegant in theory, this mechanism is prone to black swan events in the underlying BitShares. A significant enough down move would create a positive feedback cycle of selling to cover, potentially driving the value down too far below par value.

MakerDAO: According to MakerDAO's whitepaper, two key features underpin the stability of the Maker DAI stablecoin: Collateralized Debt Positions (CDPs) and MKR governance tokens. CDPs are smart contracts that lock up a collateral asset in exchange for DAI stablecoins, the same mechanism as used in BitUSD. Maker plans to allow many different tokens to be used as collateral assets, diversifying the risk from token flash crashes. The system self-governs by paying stability fees to holders of MKR tokens, incentivizing these token holders to vote on certain risk parameters sensibly to ensure stability. The DAI has a target rate that is based upon the SDR, which is essentially a weighted basket of five major fiat currencies.

There are a few potential concerns with the Maker model, including whether or not their stability mechanism can withstand a rapid depreciation in their top collaterals, such as Ether. The biggest concern, however, is Maker's scalability since it requires an excessive amount of collateral to back up each coin. This makes it very expensive to mint new coins that are required for scaling up due to the opportunity cost of capital. Basecoin: Basecoin is an attempt to create fiat currencies on a public blockchain as described in their whitepaper. This model aims to set token value through the manipulation of the money supply. Similar to how government monetary policy influences the real purchasing power of its citizens, Basecoin uses a bond issuance and buyback mechanism to influence the real purchasing power of Basecoin. When Basecoin is trading above its peg value, the network increases the money supply by purchasing bonds from users or Baseshare holders when no more bonds need to be paid out. When Basecoin is trading below peg value, the network contracts the money supply by selling bonds at market price.

While Basecoin takes a novel approach to tackle the stablecoin problem, it falls short of being a compelling solution. The assumption put forth can be categorized as simplifying many aspects such as zero inflation being the optimal long-run state, and therefore provides no precise mechanism for changing system parameters away from such defaults. In addition to this, the approach lacks from a cold start problem, unlike the other stablecoin approaches where the system is bootstrapped by leveraging existing value, this one tries to create it spontaneously, which in turn, requires other participants to have already accepted and given the token value.

## **USDST STRUCTURE & FUNDS FLOW**

It is a cryptographic token built on the Ethereum network according to the ERC20 standard and represents a unit of 1USD equivalent monetary value of USD that is stored electronically in a distributed ledger to represent a claim on the issuer and are delivered on the Ethereum network, on receipt of funds, to make payment transactions to persons other than the issuer, are often labelled "fiat-backed stablecoins" in the public real-time audited system. Based on this definition, every USDstablecoin represents a claim on the issuer over the funds it received from users. All The funds are held by a custodian for this purpose in a segregated account to ensure the funds backing USDSTABLECOIN are redeemable according to the terms of service, either based on bilateral contracts.

# **TOKEN DETAILS**

#### Issuance

The user transfers funds to the account the issuer opened with a custodian who shall keep them safe. Upon confirmation that its custodian has received the funds, the issuer creates and allocates an equivalent amount of USDstablecoin through the smart contract it maintains. Since the issuer is directly accountable for the redemption of USDstablecoin.



## Transfers

Through the Ethereum network, the sender of USDstablecoin initiates the transfer to a receiving user by instructing the smart contract accordingly. Network participants verify that the transfer is in line with the rules of the initiative and validate the transfer.



## The process of Redeeming

Units of USDstablecoin is similar to the issuance but works in reverse. A user may send units of USDstablecoin to the dedicated network address specified by the issuer who shall withdraw them from circulation (in jargon "burn" them) to maintain the redeemability of circulating units for the funds backing them. Once these units are burnt, the custodian is instructed to transfer an equivalent.



## **USE CASES**

#### Safe Haven Asset

Stablecoins have a value that is designed to be stable over any period. This feature presents stablecoins as an ideal safe have asset because, unlike cryptocurrencies such as Bitcoin which may fluctuate dramatically in price daily, users using stablecoins to store value experience no risk of loss due to them having full custody of their assets. The importance of both the price stability and self-custodial nature of stablecoins has recently been illustrated with the politicoeconomic crisis in Venezuela, where many citizens fleeing the country have stored their savings in Bitcoin to avoid confiscation of their fiat money.

### Trading

Fiat onramps and offramps cost fees, provide stablecoins to be a prime solution for exchanges and institutional traders who wish to obtain the ability to reduce crypto exposure without the need to fully cashing out. Such use has been presented in a case showing full effect; Tether, the largest stablecoin by market capitalization, was used in 40% of transactions on Binance and 80% of transactions on Huobi, which are two of the world's biggest exchanges.

#### Payments

The use of stablecoins as payment present large benefits to businesses, because, in doing so, they circumvent the 2-3% transaction fees that accompany the intermediary processing fees by financial institutions. Such actions have been most recently presented by Facebook Libra, which has taken on payments globally, therefore taking advantage of the low transaction fees which blockchain technology enables.

#### Remittance

Cross-border payments and remittancesBillion portray a large issue that many overseas workers face upon sending money back home. This is due to the high transfer fees when it comes to sending money internationally. For example, most migrant workers in Asia <u>send</u> <u>home</u> approximately 180euro monthly, but they must pay 10euro in international transfer fees—half a day's wages gone for many. In light of this, blockchain solutions like Ripple's xRapid (XRP) have been developed, demonstrating the viability of the blockchain in solving remittance issues. However, stablecoins portray the ability to lower fees even further due to their inherent price stability.

#### Payroll

In November 2018, Japanese shipping company Nippon Yusen Kaisha introduced plans to <u>pay</u> <u>its workers</u> using USD-pegged stablecoins, marking a first in using stablecoins to deliver payroll. These measures presented the sea workers an easier way to manage their finances, as well as enabling sending and converting money back to their local currencies a more streamlined, low-fee process. Such cases present the need for the use of stablecoins as many workers come from different nations and transact from one country to another frequently. Thus, using stablecoins as payroll will dramatically reduce high international fees.

#### Settlement

The subject of normal bank hours reduces the reliability of settlements being paid out and delivered at immediate effect. Stablecoins, on the other hand, operate 24/7 as they run on the blockchain and do not require a centralized financial institution with operating business hours. Therefore, parties receiving compensation from the settlement can receive their money instantaneously through stablecoins.

#### Escrow

Stablecoins enable the process of escrow to be completely automated through the use of smart contracts that, in turn, programmatically evaluate escrow conditions, without the need for institutional intermediation. Furthermore, smart contracts using stablecoins are on the blockchain, thus presenting themselves as fully and publicly auditable. Lastly, stablecoins provide price stability to escrow contracts, which, especially with large escrow holdings, can suffer significant losses from volatility.

### Lending

Stablecoin lending is currently one of the most high-yield opportunities for debt investors, offering double-digit interest rates. This demand is fuelled by massive institutional demand for stablecoin loans, which ties back to stablecoins' use in trading. Compared to savings accounts offered by banks which max out at <u>2.15 APY</u>, stablecoin returns on decentralized crypto lending platforms can be as high as 15%.

### **Alternative Banking**

<u>1.7 Billions</u> adults worldwide do not have access to a bank account. Stablecoins presents a simple solution with one only needing internet access to have a stablecoin 'bank account'. What is more, users have full custody of their funds with stablecoins and therefore are not subject to bank failures or limited bank hours. Not only individuals but also underbanked businesses face problems with opening a company bank account due to a variety of reasons.

Stablecoins present the solution as a method of alternative banking, thus allowing them to store their assets securely.

## **Powering Decentralized Applications**

Decentralized applications with payment integration usually accept the native token of the platform that they run on, such as Ether. But because ether's price fluctuates, the payments that decentralized application creators receive are subject to the variable market price. This could affect the development and sustainment of these decentralized applications if they do not receive enough funds from dropping payment prices. Stablecoins allow for a more robust decentralized application ecosystem because they can be used as a stable payment method for decentralized applications.

## **BENEFITS**

### Faster Speed

Stablecoins make various financial processes faster. Escrow is streamlined by smart contracts utilizing stablecoins. Settlement and banking with stablecoins allow for transactions at all hours because the blockchain operates independently of a central institution with set hours.

Stablecoins present faster financial processing power. Escrow is streamlined by smart contracts utilizing stablecoins. Settlement and banking with stablecoins allow for transactions to occur all hours due to the blockchain operating independently of central institutions' set hours.

### Lower Fees

Credit card processing fees across large credit card companies such as Visa, MasterCard, and AmEx average about 2 per cent per transaction. Because of this, many smaller businesses charge customers more for credit card purchases, prohibit the use of certain cards with higher fees, or solely allow them to withdraw cash only. However, these high transaction costs can be circumvented through the use of stablecoins, providing value for both businesses and customers.

### Borderless

The ability of cryptocurrencies to be an anonymous, borderless store of value has proven itself to be a real-world necessity for millions. In Venezuela, people cannot flee the country with their fiat money. They cannot send it internationally through their banks and they cannot physically carry their money with them, as it would be seized from them at the border. As such, Venezuelans have turned to Bitcoin. Though Bitcoin presents as a viable option, stablecoins provide a much better store of value than Bitcoin and Boliver. Moreover, stablecoins are not subject to speculative markets or wild inflation.

#### Transparent

Transactions on the blockchain can be viewed from a blockchain explorer by anyone with internet access. Moreover, stablecoins present full transparency of the process by which they are backed through regular audits, which USDST does. As trust in Tether erodes, there is a need and want for coins that offer more transparency to overtake it.

#### Programmable

Stablecoins are fundamentally made up of code, enabling features to be added to them, therefore adapting to changing needs. For example, loyalty programs may be built into branded stablecoins such as Walmart's upcoming stablecoin. By building loyalty programs on top of a company's "branded" stablecoin, loyalty becomes directly integrated into the user experience. This enables users to easily check their balances of their stablecoins and their loyalty rewards in one single application, therefore eliminating the inconvenience of reward cards. Stablecoin integration with loyalty programs creates a convenient and updated customer experience in a saturated loyalty marketplace, where convenience plays a critical role.

#### API

By supporting real currency-backed stablecoins across different blockchains, USDST will create an API for applications that integrate with a variety of DApps in the background. For example, suppose an application requires you to make a payment on a storage DApp on Ethereum. Instead of a complicated and lengthy user experience which requires one to install Chrome extensions for Ethereum, with their respective token accounts on each, our API allows the user to seamlessly send their USDstablecoin tokens across these different blockchain apps, with cross-chain atomic swaps implemented in our backend—resulting in a payments UX which will support consumer adoption of cryptocurrencies.

#### Disclaimers

If you read the following whitepaper, you are agreeing to have read and agreed to the following disclaimers: This whitepaper does not constitute legally binding disclosure as to USDstablecoin tokens. USDST intends to sell and redeem its tokens according to terms of use

only to KYC/AML/ Sanction List-screened individuals in compliance with applicable laws. USDstablecoin tokens shall not be sold to or purchased from persons residing or located in Iran, Iraq, Libya, Burma (Myanmar), Liberia, Sudan, Syria, Zimbabwe, Rwanda, Cote D'Ivoire, Congo, Somalia, Angola, Ethiopia, Yemen or North Korea and certain other jurisdictions. Neither USDST nor this whitepaper should be considered to be providing legal, investment or tax advice. You should not treat any information in the below whitepaper as an official recommendation to make any particular decision regarding USDST as defined in this whitepaper relating to usage, legal matters, investments, taxes, cryptocurrency mining, cryptocurrency exchanges and digital wallets, etc. We strongly suggest seeking advice from your own financial, investment, tax, and/or legal advisers. Neither USDST nor any of its shareholders, investors, partners, advisors, employees, contractors, consultants, agents and affiliates will accept responsibility for any loss, damage or inconvenience that is a result of relying on information published in this whitepaper or from www.usdst.io.