

Tether is a semi-decentralized cryptocurrency that offers individuals the advantages of transacting with blockchain-based assets while attempting to mitigate adverse price risk.

Tether aims to achieve these objectives by receiving fiat deposits and issuing corresponding USDT tokens on a 1:1 basis, which are exchangeable in secondary markets. USDT tokens use an IOU issuance model which allows users to redeem tokens for U.S. dollars at any time.

Project Overview

Name	Tether
Issuer	Tether Limited
Category	Currency token
Sector	Stablecoin
Sale Start	10/06/2014
Sale End	N/A

Token Overview

Name	Tether
Symbol	USDT
Type	Omni Layer
Initial Distribution	N/A
Current Supply	2,520,000,000
Max Supply	N/A
Emission Type	Dynamic

Resource Links

- [Website](#)
- [GitHub](#)
- [Twitter](#)
- [Reddit](#)
- [Whitepaper](#)

Project Background

Tether is a cryptoasset commonly known as a “stablecoin” that aims to keep a fixed 1:1 exchange ratio with the U.S. dollar. The project was created as an attempt to solve two major issues with existing cryptoassets; merchants and businesses are hesitant to transact in assets that have high volatility and existing banking infrastructure makes it difficult to convert between fiat currencies and cryptoassets. Some of these issues stem from the relatively low capitalization of cryptoassets, inefficiencies in the modern banking system, and stringent or undefined regulations related to know-your-customer and anti-money-laundering laws.

To address these perceived issues Tether created a cryptographic token that claims to be backed fully by deposits of U.S. dollars held at banks. Tether utilizes the Bitcoin blockchain, through the Omni layer, to issue and track tokens. While the tokens themselves operate in a decentralized network, Hong Kong based Tether Ltd controls the process of creating or redeeming tokens. This report focuses on USDT, the tokens tied to U.S. dollar deposits, though there is a small amount of Euro tokens in circulation.

Exchanges have been the primary users of USDT as an alternative to fiat currencies, reducing or eliminating the need to maintain outside banking relationships. Notable exchanges that utilize the token include Bitfinex, Bittrex, Binance, Kraken, Huobi, Poloniex, Liquid.io, Gate.io, and OKEx. Tether shares many common executives with Hong Kong based Bitfinex.

Proof-of-reserves

Tether relies on a proof-of-reserves system to ensure that bank deposits match circulating tokens. This requires a third-party to audit Tether's bank accounts on a regular basis to show that U.S. dollar reserves are held in an amount equal to outstanding tokens.

The proof-of-reserves system has proven controversial for Tether after a series of delayed audits and unclear banking relationships. On April 22, 2017, Tether announced that they were unable to process wire transfers through their existing banks and followed up with an announcement on Sept. 5, 2017, that they had found a new bank to use in the short-term.¹ On Sept. 28, 2017, Tether released a preliminary review signed off on by third-party accounting firm Friedman LLP. It is important to note this was not a full audit to verify funds but simply included Friedman viewing screen-shots or printouts of bank account details. Since the review, the amount of outstanding Tether has grown to \$2.45 billion with no official audit to confirm that reserves are held as promised.

In Jan. 2018 the project announced that it had ended its relationship with Friedman LLP who was conducting an audit on Tether's balance sheet.² As of the time of this report it remains unclear where Tether holds bank accounts and if they have engaged a new auditor.

Technology

USDT tokens are issued via the Omni Layer protocol, which was previously known as Mastercoin. Omni is a consensus network that supports various applications such as a decentralized exchange, securities transcriptions, on-chain data feeds, savings addresses and self-stabilizing currencies.

The system takes advantage of Bitcoin's OP_RETURN scheme, which allows users to include 40 bytes of arbitrary data in the scriptSig field of a transaction. The OP_RETURN schematic designates a "prunable" output which miners can recognize as zero-valued and discard from their unspent transaction output (UTXO) base. Meanwhile, the extra data is still appended to the blockchain.

This system provides an effective way to store information with the security guarantees of an immutable distributed ledger, while reducing bloat on the blockchain. Users can embed specific information into the hex segment of the ScriptPubKey field in a Bitcoin transaction. The Omni protocol interprets this information where it is used to initiate transactions. By leveraging the Bitcoin blockchain the Omni protocol is able to take advantage of the strength of the underlying blockchain without needing to create a new consensus system.

Tether uses an IOU issuance model where users have a claim to some form of asset that exists outside the blockchain, in this case U.S. dollars. Each USDT represents a claim for \$1.00 held in the bank reserves which users can redeem at any time.

In order to prove that reserves exist and the system is solvent the project relies on a proof-of-reserves system. The system is fully collateralized when the number of USDT in circulation matches the value of the funds held in accounts operated by Tether Limited. Both of these in theory are trivial to audit. Outstanding USDT balances can be viewed on any Omni Layer or Bitcoin block explorers. Similarly, Tether Limited has pledged to upload audits of their bank balances and financial transfer statements on their transparency page to ensure solvency.

Distribution

Hong Kong based Tether Ltd. is the sole entity capable of altering the circulating supply of USDT tokens. Users create new tokens by depositing fiat currency into bank accounts operated by Tether Limited, which leads to a creation of new USDT tokens on a 1:1 reserve basis. USDT can be transacted over the Omni layer in the same manner as bitcoins. If a user wishes to redeem USDT they can send tokens to an address controlled by Tether Ltd. who will destroy the tokens and transfer fiat currency to the user's bank account.

Issuance of USDT grew dramatically in 2017. Outstanding USDT tokens swelled from \$9.0 million to over \$1.74 billion by the end of the calendar year. In 2018 alone, \$900 million worth of tethers have been issued. The company's current balance sheet shows liabilities amounting to \$2.45 billion worth of USDT.³

¹ Source: <https://tether.to/announcement/>

² Source: <https://www.coindesk.com/tether-confirms-relationship-auditor-dissolved/>

³ Source: <https://www.omniexplorer.info/>

Team

J.L. van der Velde

CEO

- Current CEO of Bitfinex

Giancarlo Devasini

CFO

- Current CFO at Bitfinex

Philip G. Potter

Chief strategy officer

- Current chief strategy officer at Bitfinex

Matthew Tremblay

Chief compliance officer

- Current compliance director at Bitfinex

Stuart Hoegner

General Counsel

- Principal at Gaming Counsel Professional Corporation

Additional Resources

- [Tether Developer API](#)
- [Announcement Page](#)
- [Transparency Page](#)
- [USDT Issuance Tracker](#)

This report has been prepared by a member of the Messari community and is for educational purposes only. Community members produce research on a voluntary basis and are not compensated by Messari. Messari is an open-source platform and these reports, along with the accompanying data, will be made available through [messari.io](#) and the soon to be launched Messari data library.

Reports published by Messari should never be considered investment advice, including but not limited to, an endorsement of a cryptoasset or a recommendation to buy or sell. The analyst that wrote this report maintains a position in cryptoassets, including the one covered in this report. Messari requires that employees disclose any holdings when reviewing or publishing community reports. This report was reviewed by Eric Turner, CFA. At the time of publication Eric had positions in bitcoin (BTC), ether (ETH), and dogecoin (DOGE).

Messari makes no guarantees to the completeness or accuracy of this information. If there is incorrect information in this report, please contact eric@messari.io, and we will update accordingly.