

Tokenizing Total Cryptocurrency Market Capitalization For Real Time Trade

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Last Updated: July 2019

Abstract

Next to the underlying price of Bitcoin itself, Total Cryptocurrency Market Capitalization is the most widely quoted and well known cryptocurrency data metric in the world.

While referenced and quoted every day by millions of people within the investment community as one of the key metrics measuring the expansions and declines transpiring in the space, Total Cryptocurrency Market Capitalization currently has no means or ability to be traded in real time form. This paper will provide insight into how Cryptex has successfully tokenized this key metric, in our commitment to providing industry participants nominalized exposure to the price movement of the entire sector.

1 Introducing: Cryptex Total Market Capitalization Token (TCAP.X)

For cryptocurrency investors, traders, funds and institutions, TCAP.X is an ERC-20 backed smart contract that tokenizes real time Total Market Capitalization data from all cryptocurrencies and tokens listed on 10 global exchanges, thus creating a new crypto asset that makes Total Market Capitalization available for trade in a single, secure, collateral backed solution.

2 The 330 Billion Dollar Opportunity In Data

Combining blockchain technology with the process of data aggregation, 330 Billion dollars (as of 06/29/2019) of raw market capitalization data can be brought to market via cross collateralized, asset nominal tokenization.

Asset nominal tokenization starts with the process of taking a data metric, such as Total Market Capitalization. This metric is then set to a divisor of 10. The new, nominal asset token value now trades in lockstep with the underlying data metric it tracks.

By collateralizing the new smart contract against a basket of stablecoin, the assets within the contract now trade in lockstep to the tracking API, thereby tokenizing total market capitalization.

3 TCAP.X Price Methodology

Step 1.

TOTAL MARKET CAPITALIZATION derived/aggregated from all trading pairs (minus stablecoins) on the following exchanges:

Exchange	Total Trading Pairs
Binance	493
Gemini (Pending Approval)	12
Kraken	74
Bitstamp	14
Bitfinex	109
Bittrex	245
Gate.io	376
OKEx	407
HitBTC	809
UpBit	334
Total Pairs:	2,873

Step 2.

REMOVE STABLECOIN(S)

There will be no fiat stablecoin(s) included in the Cryptex Total Market Capitalization API. Stablecoins are the crypto alternative to fiat currencies and will not be included.

Step 3.
NO OUTLIER DETECTION

There will be NO outlier detection included in the Cryptex Total Market Capitalization. Cryptocurrency markets are young, notoriously volatile, are subject to various flash crashes, low volume events, price swings, etc., Our goal is to capture the movement of the space as close as we possibly can.

Step 4.
HMAC VERIFIED FOR FULL AUDITABILITY

Real time Market Data snapshots of the Cryptex Total Market Capitalization API will be HMAC signature verified to be signed by Nomics, (Nomics.com) our third party data provider. HMAC signature verification ensure the authenticity and integrity of all data provided by Nomics. Data will be further broadcasted in real time to both exchange order books and time stamped, on chain, for block creation/minting/burning purposes. Auditors can then review the corresponding time stamped HMAC signature and by clicking it on the Cryptex website, be taken to the appropriate OHLC candle on the TCAP.X chart, which can then be easily cross referenced with public exchange API data in our goal of providing full data transparency to exchanges and traders.

Step 5.
OFF CHAIN/ EXCHANGE ORDER BOOK LATENCY

Total market capitalization data will be received from Public Exchange Websocket APIs which will then be aggregated and broadcasted through Cryptex proprietary Websocket APIs in our goal of providing exchange/ order book price calculation speeds of between < 1 second - 1 millisecond.

Step 6.
CRYPTO-COLLATERALIZED

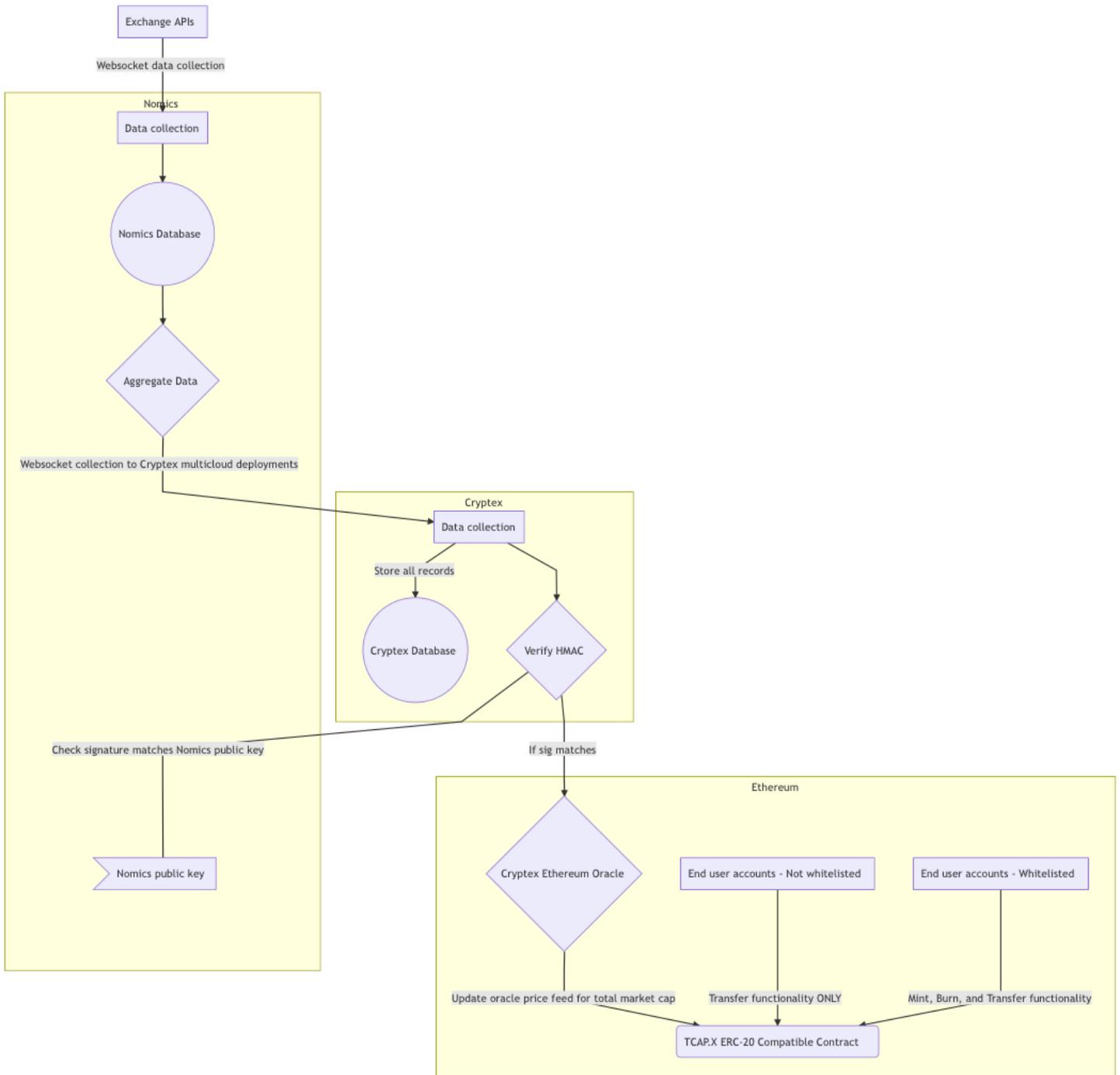
Below, we will provide a basis of our collateralization workflow which will be followed up with a yellow paper for technical review.

TCAP.X is a stablecoin in the sense that it tracks an external and ever moving asset metric. In the case of TCAP.X, this metric is real time Total Market Capitalization.

To do so without underlying collateral would have created a model where, while an aggregated API/ divisor tracks the referenced metric correctly, there is no inherent value to a simple pricing mechanism and thus, no guarantee it would be traded at the price we quote it, just because we quote it. There must be backing assets behind the API. Therefore, for a single TCAP.X token to be minted, there must be an initial cash collateral posted first, by via exchange or permission granted entity. The underlying cash collateral then trades subject to the price movement of referenced Cryptex API's used to calculate the price of Cryptex tokens. Each TCAP.X token is backed by a store of valuable cryptocurrency assets. As long as the assets are adequately over-collateralized, then the system is safely backed.

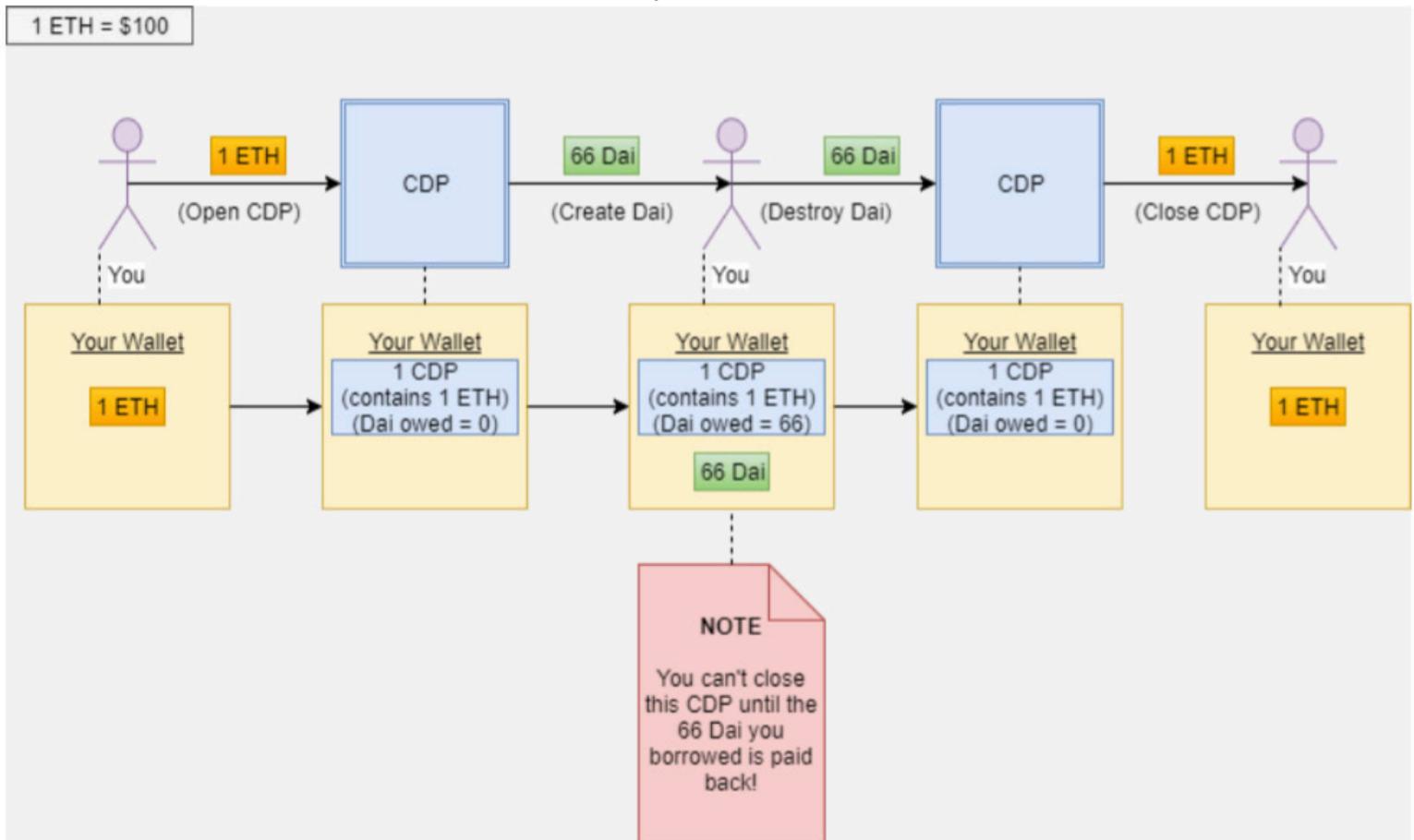
Cryptex tokens are stablecoins that maintain a peg to their tracking asset(s). A collateral backed asset is one in which there exists at least 100% value to back each token. Cryptex tokens can grow their own corresponding market values based on the underlying "stablecoin" equivalents and holdings associated with collateralizing each token. Debt positions are opened by permission granted entities to lock collateral and therefore mint new stable tokens. The price of the token is always 1:1 within the contract according to a data set updated within the price feed on chain. KYC/AML permission granted/ white listed entities (ie exchanges) will have the ability to mint/burn tokens based on several factors, not limited to demand, price fluctuation, stablecoin inflows/outflows, etc.

The following flowchart provides an overview of the Cryptex Total Market Capitalization (TCAP.X) tokenization/ smart contract process:



Source: Preston Van Loon for Cryptex Global Markets

The flowchart below provides an overview of the collateral process:



Source: Medium/ Opening and closing a CDP while minting/burning DAI
 Author: Gregory DiPrisco (No affiliation to Cryptex Global Markets)

4 Why a Semi Centralized Solution Makes the Most Sense

In order to create a token that trades based on the value of Total Market Capitalization, a semi centralized approach is warranted for three reasons.

1. While Cryptocurrency exchange data API's are public, to create a central source of Total Market Capitalization Data, this data must be aggregated by that central source.
2. The aggregated data must then flow to the exchange/ market participants offering TCAP.X. Even in the event you had full decentralization with multiple price oracles streaming quotes, the price of TCAP.X and subsequent data aggregation from multiple exchanges in calculating it still must come from "somewhere".

3. Given this set of circumstances, it is critical that this “somewhere” must be a trusted, verifiable source, with an accredited and trusted industry reputation.

After extensive due diligence, we determined the best source for this data, prior to Cryptex aggregation of it, was Nomics.com.

Nomics, our third party data provider for this purpose, streams to us a custom Total Market Capitalization API based on our methodology. This Total Market Capitalization data is then further aggregated by Cryptex for price quotation of our Total Market Capitalization (TCAP.X) token.

5 Competition and Market

Currently, several firms are rolling out traditional finance structured vehicles, such as OTC ETP’s in accordance to Regulation D or Rule 144. These products purchase a small, underlying per share equivalent of Bitcoin or other Cryptocurrency. Then, the ETP share typically trades at a substantial premium to the underlying cryptocurrency asset, given the limited listed publicly traded solutions.

The Grayscale Bitcoin trust, GBTC, currently with 2.5 billion in assets under management, currently trades at a 45% premium to the underlying bitcoin a customer can simply purchase with a Coinbase account.

Their recently launched Ethereum Trust, ETHE, traded as high as a 2,000% premium to the underlying spot ETH equivalent.

These types of products charge annual fees of 2.5% while providing zero innovation to the market. They strangle investors and in our opinion, make the space less attractive to potential investors.

In terms of bundled Crypto products, the choices for investors are only to purchase a bundle of coins, weighted on market cap, that trade solely on that specific exchange, for a fee. Again, another option lacking innovation, as nothing stops the investors from buying those coins outright themselves.

Companies like Bitwise offer similar options.

Source: Grayscale GBTC & ETHE

Source: Bitwise 10 privage index fund

In the case of Bitwise, for a bundle of the top 10 coins, annual expenses average 2.5% in management fees, 3% early withdrawal fees and offers WEEKLY redemptions after the first 12 months.

Total Market Capitalization (TCAP.X) tokens offer instantaneous settlement and carry no annual fees, other than standard trading commissions, which vary on an exchange by exchange basis. Each coin has its own underlying value, which can be transferred by clients to each Cryptex partner exchange quickly, efficiently and securely.

Data aggregation of real time Total Market Capitalization data from 10 major, data transparent exchanges allows for tracking thousands of cryptocurrency pairs in one simple solution, providing investors with the alternative to having true exposure to the entire crypto space via one asset.

6 Income Streams

Cryptex plans to list our tokens to Cryptocurrency Exchanges looking to provide new and exciting offerings to their customers. In being the first to provide such an asset to our partners, we will retain up to 5% of all newly minted TCAP.X for Cryptex Treasury purposes. Cryptex will also be the administrator of the TCAP.X smart contract, with the ability to earn interest on stablecoin assets placed under management.

Using Grayscale as an example with current AUM of 2.7 billion, assume initially, we capture roughly 4% of this base.

This represents approximately 100 million dollars of interest generating AUM.

This represents approximately \$5,000,000 of TCAP.X tokens held in Cryptex treasury.

If Cryptex reaches a point where we capture 1 billion in AUM (40% of Grayscale), this represents \$50,000,000 worth of TCAP.X tokens held in Cryptex Treasury. Plus the potential interest income as the smart contract administrator.

The goal of Cryptex is providing state of the art, transparent products to the marketplace versus the current available alternatives. In being the first total market capitalization tokenized solution of its kind, we expect to gather significant AUM upon securing exchange listings.

It is important to note while we are starting with Total Market Capitalization (TCAP.X), we can replicate our data methodology process and income model for a complete lineup of future offerings thereafter.

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