NZD Stablecoin (NZDs)

WHITEPAPER

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Executive Summary

"NZDs" is a New Zealand Dollar stablecoin backed 1:1 with physical New Zealand Dollars in a cash and cash equivalent treasury managed by a New Zealand registered Financial Services Provider (FSP). The New Zealand Dollar cash (and cash equivalents) which underpin NZDs are held on bare trust for holders of NZDs (Holders) under a bare trust deed and thus the trust funds of Holders will not form part of the assets of the NZDs issuer in the event of a liquidation.

New Zealand's currency is a leader in adaptability, resilience and market trust. NZD is the 10th most traded currency globally. The NZD stablecoin will offer cryptocurrency users the stability and utility of the New Zealand Dollar with the versatility of a cryptocurrency. NZDs will have governance, management and transparency processes and procedures, with a focus on operations and compliance day-to-day. Techemynt is the issuer of NZDs and is a Registered Financial Service Provider (FSP: 9429048880428). NZDs may be made available to people who have an account on the Techemynt portal. NZDs will eventually be listed on exchanges to enable secondary trading. Techemynt generates returns through interest on the deposited New Zealand Dollars and through stabilizing the NZDs market.

Contents

Introduction

Over the last ten years, digital assets have evolved from a single cryptocurrency, Bitcoin, to a variety of other offerings. Nascent crypto industries such as Decentralized Finance (DeFi) are taking market share from legacy financial services and creating decentralized services with novel mechanisms. One of the major downsides of many crypto assets is price volatility against fiat currencies, which makes hedging difficult and spending less attractive.

This issue was addressed in 2014 with the launch of Tether's USDT, a cryptocurrency that claims to be backed 1:1 to the US Dollar (USD). The idea was that because each USDT was backed by an equivalent USD in Tether's bank account, the cryptocurrency would maintain its price peg to the USD and thus be stable. This was the genesis of stablecoins. Tether currently does upwards of $30b worth of daily transaction volume and is the most traded cryptocurrency. Another reason for Tether's success is that it allowed exchanges which did not have the regulatory clearance to offer USD markets to provide USDT markets as an alternative.

> *"A digital token backed by fiat currency provides individuals and organizations with a robust and decentralized method of exchanging value while using a familiar accounting unit."*
>
> *- From the original Tether Whitepaper.*

Following this genesis, there has been a significant increase in the number of stablecoins that have been launched, which range from other fiat-backed stablecoins to algorithmically backed stablecoins. There has also been a range of fiat-backed stablecoins pegged and backed by currencies other than the USD, which include the CNY, EUR, GBP, KRW, SGD, CHF, IDR, VND, BRZ, and other smaller currencies.

This paper outlines a new stablecoin pegged and backed to the New Zealand Dollar (NZD). The NZD is amongst the top ten most traded currencies globally1 and a digital blockchain-based equivalent will open up opportunities including arbitrage and ease in remittance and digital payments.

[1]This paper will refer to the proposed New Zealand Dollar stablecoin as NZDs.

[1] [1] https://everfx.com/the-top-20-most-traded-currencies-in-the-world-2020/

Why Create NZDs?

The decision to create an NZD Stablecoin stemmed primarily from two factors:

1) To bring the integrity and relative stability of the New Zealand Dollar to the global cryptocurrency market enabling an alternative solution to global exchange of value and store of value.

2) To update the New Zealand dollar to utilize blockchain's transformative properties creating future growth of the New Zealand cryptocurrency industry.

With the NZD being the 10th most traded currency in the world[2] and cryptocurrency investment and trading increasing in popularity in New Zealand, Techemynt believes it is an opportune time to fill the gap in the market and create an NZD based stablecoin. Holders of the stablecoin are likely to include:

- Forex & Crypto traders
- Crypto funds and investors
- Merchants and individuals transacting with NZDs

These groups are elaborated on later in the whitepaper under the "Market" heading.

[2] https://www.bis.org/statistics/rpfx19_fx.pdf

Stablecoins Have Proven to be Very Popular

The table below shows a selection of currencies that have been pegged to a stablecoin. The majority of stablecoins are pegged to the USD, which makes creating a novel peg more attractive from a competitive perspective. The proliferation of regional based stablecoins points to an active use case (locally denominated and backed digital currency) that creates a stable base for traders.

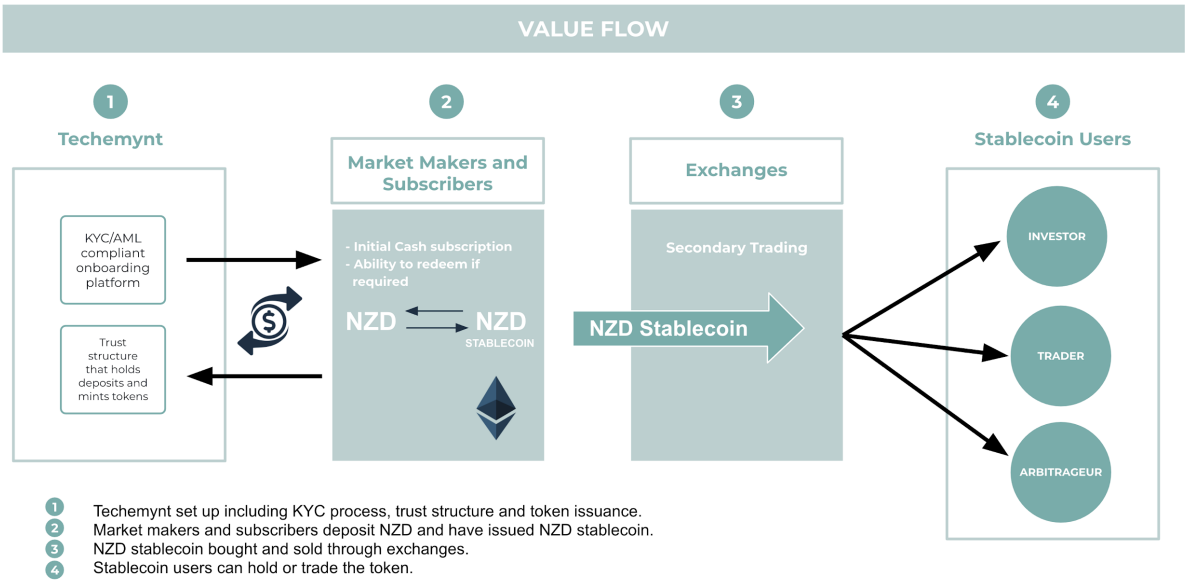
Ticker	Name	Fiat Peg	Market Cap (USD)[3]
USDT	Tether	United States Dollar	$18,185,755,497
USDC	USD Coin	United States Dollar	$2,805,622,086
EURS	Statis Euro	Euro	$38,554,066
KRT	Terra KRW	South Korean Won	$109,316,495
TAUD	TrueAUD	Australian Dollar	$5,374,651
1SG	1SG	Singaporean Dollar	$7,878,759
XCHF	CryptoFranc	Swiss Franc	$5,183,462
VNDC	VNDC	Vietnamese Dong	$5,200,225
IDRT	Rupiah Token	Indonesian Rupiah	$2,279,932
TGBP	TrueGBP	Pound Sterling	$8,505,267
TCAD	TrueCAD	Canadian Dollar	$1,525,445
THKD	TrueHKD	Hong Kong Dollar	$3,033,696
TRYB	BiLira	Turkish Lira	$1,219,288
CNHT	CNY Tether	Chinese Yuan	$3,584,850

[3] As at 19/11/2020 from CoinGecko

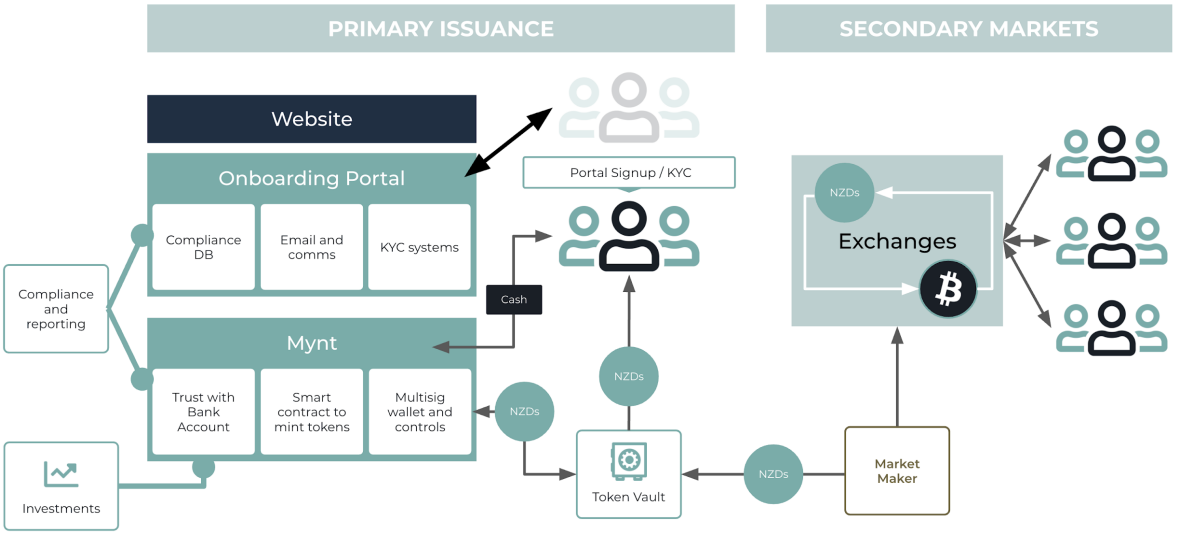
Flow-of-funds Process

NZDs can be purchased from Techemynt by a person who holds an account on the Techemynt portal, where they will have to undergo Techemynt's customer due diligence checks before an initial purchase can be made, or in some cases, before a subsequent purchase can be made. This primary issuance will be restricted to buyers wishing to purchase $100,000 or more New Zealand Dollars worth of NZDs. It is envisaged that purchasers of NZDs will be able to trade them in secondary markets such as crypto exchanges which will likely undertake their own customer due diligence checks.

Redemption of the NZDs token for New Zealand Dollars can only be via validated entities through the Techemynt portal (those that have undergone customer due diligence checks). The minimum redemption amount is the same as the minimum purchase amount (from the Techemynt portal), $100,000 New Zealand Dollars. Users of NZDs that fall below the $100,000 New Zealand Dollar threshold and want to convert back into New Zealand Dollars can do so via secondary markets such as a crypto exchange.



Technology Stack



Customer onboarding (regulatory document storage and protection policy)

As part of Techemynt's obligations under the Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (AML/CFT Act) in New Zealand, it is required to perform Customer Due Diligence (CDD) and in some cases Enhanced Due Diligence (EDD) on every customer using the Techemynt portal (including "beneficial owners" of a customer) prior to opening an account on the Techemynt portal. Techemynt must also regularly perform CDD and EDD on such customers. This includes, without limitation, obtaining documentation such as identity documents (e.g. passport) with full name and date of birth, proof of address (e.g. utility bill), politically exposed person (PEP) checks, and if required, determining a customer's source of funds and source of wealth depending on the type of "customer" the customer is, the risk associated with the customer and the value of the transaction.

To comply with AML/CFT Act obligations, Techemynt will perform CDD or EDD either using our electronic identification partners systems or will use internal systems if performing manual verification. On the Techemynt portal, customers will be asked to upload documents to support the CDD or EDD process. Documents will be uploaded to a secure repository using the Amazon Web Services (AWS) technology where they will be encrypted and siloed after processing, to ensure data protection of personal information. If documents need to be stored outside of AWS, either in electronic form or hardcopy, then the documents will be secured using appropriate information security practices.

Techemynt will retain copies of documents collected in connection with CDD or EDD performed for the period of time required under the AML/CFT Act. After this Techemynt will destroy the documents.

Similarly, Techemynt must perform CDD on customers for compliance with the Foreign Account Tax Compliance Act (FATCA) and the Automatic Exchange of Information: Common Reporting Standard (CRS). Together, CDD under the AML/CFT Act, FATCA and CRS forms part of Techemynt's onboarding process of customers.

If a person has any questions about Techemynt's information security practices or how data is protected, they will be able to make contact through the website.

Protocol

NZDs will initially be minted and exist on the Ethereum blockchain, with the future possibility of being minted and existing on other blockchains, similar to how Tether and Centre's USD Coin (USDC) exist on multiple chains. Ethereum has been selected because it currently has the largest base of both users and developers.

The development and ongoing code management of NZDs will be carried out by Blockchain Labs. Blockchain Labs have audited the ERC20 release code and have deemed it fit for production. Blockchain Labs have been responsible for some of the largest smart contract audits (https://www.blockchainlabs.nz/home).

Token creation is handled by a multi-sig account controlled by Techemynt. The corresponding wallet address will be listed on the "Transparency" page of the Techemynt website along with a link to an Ethereum blockchain explorer, such as Etherscan (for monitoring on-chain activity).

For ease of reference the NZDs Token Contract is traceable at:

https://etherscan.io/token/0xDa446fAd08277B4D2591536F204E018f32B6831c

NZDs is based on the Centre[4] codebase, which is publicly available on the organisation's GitHub repo[5]. Centre is a membership-based consortium that sets technical, policy and financial standards for stablecoins, with its first stablecoin being USDC. The founding members of Centre are Circle and Coinbase, and USDC has become one of the most trusted stablecoins over the past two years. Using the Centre repo will provide NZDs with a reputable and proven code base. The Centre codebase has an MIT Licence[6], which means Techemynt has

[4] https://www.centre.io/
[5] https://github.com/centrehq
[6] https://github.com/centrehq/centre-tokens/blob/master/LICENSE

permission for:

- Commercial use
- Modification
- Distribution
- Private use

Code Base

The Centre code base[7] implements the ERC20 standard for its tokens. The following functions are supported by the smart contract:

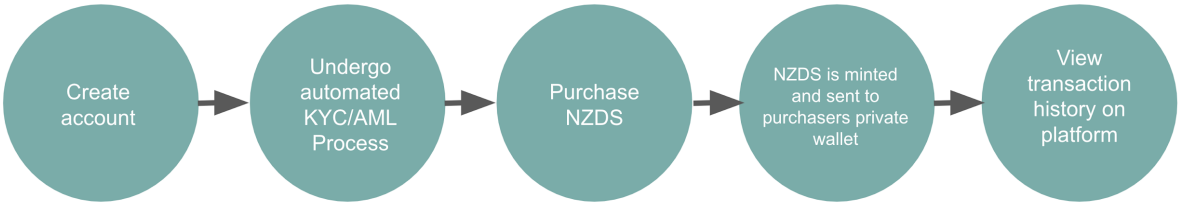
- **Minting/Burning** - tokens can be minted or burned on demand. The contract supports having multiple Minters simultaneously. There is a master Minter address which controls the list of minters and how much each is allowed to mint. The mint allowance is similar to the ERC20 allowance - as each minter mints new tokens their allowance decreases. When it gets too low they will need the allowance increased again by the master Minter.
- **Blacklist** - the contract can blacklist certain addresses which will prevent those addresses from transferring or receiving tokens. Access to the blacklist functionality is controlled by the blacklister address.
- **Pausable** - The entire contract can be frozen, in case a serious bug is found or there is a serious key compromise. No transfers can take place while the contract is paused. Access to the pause functionality is controlled by the pauser address.
- **Upgradable** - a new implementation contract can be deployed, and the proxy contract will forward calls to the new contract. Access to the upgrade functionality is guarded by a proxyOwner address. Only the proxyOwner address can change the proxyOwner address.
- **Ownable** - the contract has an Owner, who can change the owner, pauser, blacklister, or masterMinter addresses. The owner cannot change the proxy Owner address.

[7] https://github.com/centrehq/centre-tokens/blob/master/doc/tokendesign.md

Techemynt Issuance/Redemption Platform

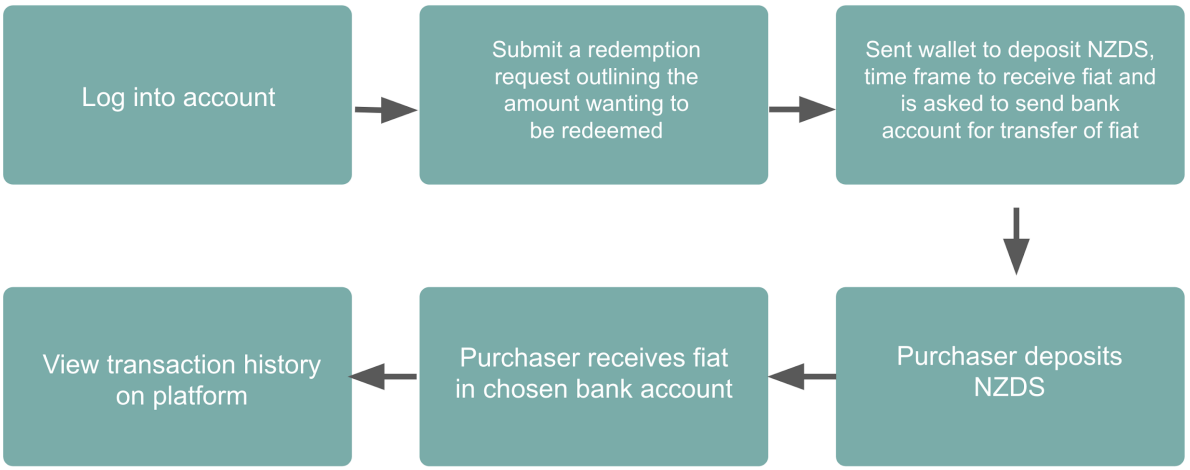
Techemynt operates an online portal which will allow account holders to purchase and redeem NZDs in a secure and efficient manner. Following is the process flow a customer will go through to purchase NZDs:

- Person creates an account on the Techemynt portal
- Person undergoes Techemynt's onboarding process on the portal (including CDD for compliance with the AML/CFT Act, FATCA and CRS)
- The person is now a "customer" of Techemynt and can buy NZDs via the portal using New Zealand Dollars
    - Customer receives Techemynt's bank account & makes deposit
    - Techemy Capital Limited (a related company) will facilitate any NZDs purchases made with crypto and alternative FIAT
- NZDs is minted and sent to the customer's wallet (the NZDs is not held by Techemynt on bare trust for the customer)
- The portal displays transaction history



Following is the process flow to redeem NZDs:

- A customer logs on to the Techemynt Portal (having previously undertaken CDD)
- The customer submits a redemption request outlining the amount wanting to be redeemed
- The customer may be required to complete Techemynt's CDD or EDD requirements again
- Subject to the individual complying with applicable conditions (which may include minimum redemption amounts and payment of applicable fees) a wallet address to deposit NZDs is sent, a time frame to receive fiat is advised and the customer will be asked to send bank account details for the transfer of fiat
- Customer deposits NZDs
- Customer receives fiat in chosen bank account less applicable transaction fee
- Portal displays transaction history



However, we assume the majority of users of NZDs will simply sell into a secondary market (rather than redeem) due to the convenience of utilizing liquid secondary markets.

Treasury Policy

At all times it is intended that the Techemynt trust will hold enough cash and cash equivalent assets to fully cover all outstanding NZDs tokens. Cash equivalents are defined as securities that have a high credit quality and are highly liquid, intended for short-term investing. They typically have a low-risk, low-return profile, and thus are suitable for the Techemynt treasury. These assets include treasury bills, bank term deposits, short-term corporate debt, and other money market instruments.

Having NZDs fully collateralized is imperative to maintaining the trust's reputation and the confidence of Holders. The underlying funds that back NZDs are held on trust for Holders, and as such the trust funds of Holders will not form part of the assets of the Techemynt in the event of a liquidation. Capital risk is minimised by having accounts and deposits at multiple different banking or financial institutions. Techemynt has a detailed Treasury Policy which sets out the controls and procedures for with respect to the capital held on trust.

Secondary Market and Wider Adoption

Beyond the Primary Issuance, it is envisaged that NZDs will be an attractive asset utilized by traders and other secondary market participants for the settlement of volatile crypto assets into a stable asset. To facilitate this, Techemynt has partnered with a leading crypto exchange in New Zealand; Dassetx.com

Techemynt has received interest from a wide range of both DeFi and CeFi platforms and on/off ramps around the globe. The natural trajectory is to expand the availability and utility of NZDs by way of listing and integrating into a range of products, platforms and on/off ramps starting in Q2 2021.

Marketing

Techemynt will deploy a multi phase strategy to adoption.

1) Phase 1 consists of Domestic NZ marketing, PR, Events and Social media in early Q2 2021 as the initial minting and secondary market listings go live. This will be a mixture of both below-the-line and above-the-line efforts in a multi-channel format.

2) Phase 2 consists of International listings/integrations and partnerships and this activity will be supported by Techemy Group's international partners both from within the Blockchain industry and traditional finance sector.

Proof of Reserves Process

As is the case with the majority of other stablecoins, each circulating NZDs will be backed 1:1 with fiat currency (in this case, New Zealand Dollars) or other equivalent cash assets in Techemynt's deposit trust accounts. The trust funds of Holders will not form part of the assets of Techemynt in the event of a liquidation as they are held on bare trust for the benefit of Holders. Every NZDs issued or redeemed is publicly recorded by the Ethereum blockchain and will correspond to a deposit or withdrawal of funds from Techemynt's trust accounts.

In terms of the New Zealand Dollars (or other cash assets) held by Techemynt in trust accounts on bare trust for Holders, regular audits by a professional auditor will be conducted to prove that the ratio of NZDs to New Zealand Dollars is correct. Auditors will regularly verify, sign, and publish Techemynt's underlying trust account balance, which will be made available on the "Transparency" page of the Techemynt website.

Techemynt Markets

Tier One: Traders

- Arbitrage - crypto or fiat (forex)
- Crypto trading

Tier Two: Investors

- Yield generation - DeFi related products
- Store of wealth - for users who wish to hold their wealth in a crypto asset

Tier Three: Users / Applications

- Remittance
- Merchants
    - In-store payments
        - Future plans to partner with a crypto debit card provider to facilitate everyday spending of NZDs
    - Online payments
        - Easy to integrate, lower merchant fees than a credit card

Future Innovations

One of Techemynt's roles following the launch of NZDs will be to build an ecosystem for further development of applications using NZDs in general fintech infrastructure.

- Uniswap listing of NZDs
- Making NZDs available on DeFi platforms to earn yield
- Facilitating technology to allow merchant payments using NZDs

Risk Disclosures

Techemynt has identified the following key operating risks (which are non-exhaustive):

Bank or financial institutions solvency / Change of support - Techemynt will work with reputable banks or financial institutions, to hold the trust funds of Holders, that surpass minimum standards as specified in its treasury policy. Techemynt will maintain strong relationships to ensure that any risk / concern / change of policy is able to be responded to in the appropriate timeframes.

Theft of tokens - Techemynt maintains a treasury and issuance policy and process that will be audited as a part of its transparency arrangements. Techemynt also has the ability to freeze tokens, which is exercised at its sole discretion.

Risk of price variation - Techemynt has established a Market Maker structure that is designed to ensure the ongoing price of NZDs is maintained around 1 New Zealand Dollar per 1 NZDs.

Techemynt as a bad actor - Techemynt is part of the Techemy Group of companies, a well respected New Zealand domiciled group of crypto focused businesses. New Zealand is considered one of the most trusted countries in the global financial sector.[8] This comes as a result of both the systems and cultures under which it operates. The governing law and requirement for registration as a financial services provider under which Techemynt operates provide for a recognised legal framework and registration requirement[9].

Please also refer to the Techemynt Risk Statement here, which sets out additional risks associated with crypto assets.

[8] https://www.beehive.govt.nz/release/new-zealand-least-corrupt-country-world
[9] https://fsp-register.companiesoffice.govt.nz/.
Note; registration is not a licence issued by the Financial Markets Authority in New Zealand. Techemynt does not require a form of licence (other than registration) to offer NZDs.

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