

# WHITEPAPER

**GYEN**

Digital JPY

**ZUSD**

Digital USD

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**GMO-Z.com** Trust Company, Inc.

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## **INTRODUCTION & BACKGROUND**

Abstract: GYEN and ZUSD are ERC-20 cryptographic tokens that are (i) issued by GMO-Z.com Trust Company Inc (“GMO Trust”), approved and regulated by the New York State Department of Financial Services, and (ii) strictly pegged 1:1 to the Japanese Yen and U.S. Dollar (respectively). GYEN and ZUSD are stable value coins that combine the creditworthiness and price stability of the Japanese Yen and U.S. Dollar with the technology and efficiency advantages of a digital asset and the oversight of U.S. regulators. As an ERC-20 compliant token, GYEN and ZUSD can be transferred on the Ethereum network. GYEN and ZUSD are created at the time of withdrawal from GMO Trust’s platform and redeemed or “destroyed” at the time of deposit into GMO Trust’s platform.

### Digital Asset and Stablecoin Market

Digital Assets have gained traction since Bitcoin emerged in 2009. As of January 2020, with a market capitalization of over \$600 billion, Bitcoin is the most highly-valued digital asset. However, more than ten years after its introduction to the market, it continues to suffer from extremely high volatility.

Stability is a fundamental characteristic of mediums of exchange, with Bitcoin’s high volatility diminishing its utility as a valid medium of exchange. The promise of digital assets has missed expectations, with visions of a frictionless and highly liquid monetary system falling short of its initial intentions. One solution that was introduced to the digital asset markets is the concept of a stable store of value that is pegged one-to-one to fiat currencies or other hard assets, such as precious metals, often called a stablecoin.

As the demand for stablecoins has already been proven to be sustainable by companies including Gemini, Circle, and Paxos, which offer USD-pegged stablecoins, there are few that issue tokens backed by other fiat currencies that have a reasonable market presence. An immediate need for a digital medium of exchange is not limited to USD. Accordingly, there will be more issuers of stablecoins entering the market, broadening the assets that back a stablecoin, such as foreign currencies, gold or other precious metals, and oil or other commodities. We believe that a JPY-pegged token will gain traction in the market, as JPY is often viewed as a safe haven currency during times of global instability.

### The Importance of Trusted Stablecoins in Monetary Systems

There are several companies that have introduced USD-backed stablecoins, with Tether’s USDT gaining the most popularity in the market, but unfortunately there have been persistent rumors that suggest USDT is not reserved one-to-one by the U.S. Dollar, which is raising concerns around its price stability. While USDT is losing retail and institutional trust in the stablecoin marketplace, other companies such as Gemini and Paxos are starting to gain market share. Gemini and Paxos have introduced their own stablecoins, but as regulated companies with reputable third-party auditors. We believe

this is what the market needs to grow - a globally accepted and trusted fiat currency backed by secure blockchain technology.

### About GMO Internet Group and GMO Trust

#### GMO Internet Group Introduction

GMO Internet Group is one of the most reputable and comprehensive providers of industry-leading internet services worldwide.

GMO Internet Group (“GMO”) launched its internet operation in 1995 when Japan was still fully embracing the internet. GMO has always prided itself on introducing leading internet services to its customer base, with the corporate slogan “Internet for Everyone.” As GMO expands further into digital assets, we seek to democratize access and scale usability of stablecoins.

GMO operates over 103 subsidiaries globally, with several of the most prominent financial services businesses in Japan. Several of GMO’s financial services businesses include:

- Foreign Exchange (GMO Click), which has had the largest FX volume in the world for the past eight years globally
- Payments (GMO Payment Gateway), which is the largest payment gateway business in Japan
- Banking (GMO Aozora): A renowned internet bank regulated by the JFSA
- Digital asset Exchange (GMO Coin), one of the only JFSA-regulated digital asset exchanges in Japan
- Digital asset mining operations

#### GMO Trust Company Introduction

GMO Trust, based in New York, is a Limited Purpose Trust Company, regulated by the New York Department of Financial Services. Issuing the World’s First regulated JPY stablecoin, GMO Trust also offers a USD stablecoin “ZUSD”. GMO Trust is on a mission to bring traditional finance into the digital age with blockchain services. For more information on GMO Trust visit <https://stablecoin.z.com/>

## **INTRODUCTION TO GYEN & ZUSD**

### Overview

We believe blockchain technology is the future of the internet and we aim to offer a global payment, money transfer, trading, clearing and settlement solution that leverages blockchain technology. Therefore, we propose the GYEN and ZUSD stablecoins to alleviate the problems inherent with unregulated and non-fiat backed

stablecoins. We believe these stablecoins represent a significant advancement in digital assets, leveraging the infrastructure, regulatory oversight and currency stability of the traditional financial system, while operating with the speed and efficiency of the internet.

GYEN and ZUSD are 100% fiat-collateralized stablecoins that will only be issued when the corresponding collateralized fiat is placed in custody with a third-party trustee. GYEN anchors its value to the price of the Japanese Yen, while ZUSD anchors its value to the price of the U.S. Dollar. Redeemable and pegged 1-to-1 with fiat currency, we can virtually eliminate volatility, while still benefiting from the advantages of digital assets, such as high transaction speeds matched with low costs. GYEN and ZUSD will function as a global currency solution on the Ethereum network.

### Trust

Unlike Bitcoin which is trustless and decentralized, trust still plays an important role for centralized digital assets since the centralized issuer has considerable impact on the stablecoin's operability and underlying systems.

As the token issuer, GMO Trust was incorporated in the state of New York under New York State banking laws and regulated by the New York State Department of Financial Services since 29th December, 2020. GMO Trust will maintain the necessary licenses and registrations to lawfully issue and redeem its stablecoins. We commit to our customers that the amount of tokens issued will always be equal to the deposits held in our partner bank(s), which is(are) based in the U.S., with publically available monthly audit reports completed and issued by a nationally-recognized, public independent audit firm in order to fulfill our commitment of transparency.

Furthermore, customer deposits will be accounted for as customer property, keeping our customer deposits safe and segregated and solely for the purpose of maintaining reserve balances for the ZUSD and GYEN stablecoins. As specified by our regulator, customer deposits will be secured at FDIC-insured U.S. banks.

### Solvency

One of the largest factors for success in digitizing various currencies is ensuring there is a 1:1 reserve held at an accredited financial institution. GYEN and ZUSD will be issued on the Ethereum blockchain, meaning the total amount in circulation can be publicly viewed. In the current banking environment, reserve balances (and any required foreign exchange conversion) are not easily viewable by the public. To assure customers that our stablecoins are solvent, GMO Trust has engaged an independent registered public accounting firm to examine and attest to the underlying currency reserves, and to issue a publically available attestation report on a monthly basis. The accounting firm adheres to standards established by the American Institute of Certified Public Accountants.

Oversight Matrix

As a regulated trust company, GMO Trust has employed rigorous policies, regulatory oversight and security standards to help ensure that its digital assets share the same robust frameworks and time-tested guardrails inherent to traditional assets.

Regulatory Approval	GMO Trust was granted a Limited Purpose Trust charter by the New York State Department of Financial Services (NYDFS) on 29th December, 2020. NYDFS continuously regulates GMO Trust as a trust organized under New York banking law.
Custody	GMO Trust holds the U.S. Dollar and Japanese Yen deposits of all customers in segregated accounts at FDIC-insured banks.
Funds Auditing	GMO Trust has engaged an independent, nationally recognized public accounting firm to conduct monthly third-party assessments on Dollar and Yen reserves to ensure full collateralization.
Smart-Contract Auditing	Leading smart-contract auditing firm Quantstamp has conducted an independent third-party audit and security review on GMO Trust’s ERC-20 smart contract.
Ethereum Monitoring	GYEN and ZUSD are issued on the Ethereum blockchain, allowing for near real-time transactions.
Transaction Surveillance and Monitoring	Industry leader Chainalysis and IdentityMind deploy their software to assist GMO Trust in monitoring their transactions and risk assessments to detect and prevent fraudulent activity.

Key Product Features and Benefits

- Stable value: 100% fiat-backed. Every token will have a one-to-one reserve balance in our segregated bank accounts.
- Transparent: Independent audit reports provided on month-end balances.
- Highly liquid: You can always redeem 1 GYEN for 1 JPY and 1 ZUSD for 1 USD directly with GMO Trust, or by trading with other digital assets on exchanges that list the stablecoins.
- Powered by blockchain (Ethereum ERC-20 protocol): GYEN and ZUSD use Ethereum technology, the most well-known standard for smart contracts in the digital asset community. All transactions operate according to the rules of a smart contract on the Ethereum platform, eliminating human error.
- No Middlemen: GMO Trust issues and redeems our stablecoins directly, allowing for increased security, transparency and service while lowering fees.
- Liquid: GYEN and ZUSD will be available on exchanges globally against

the most liquid digital asset pairs, allowing our stablecoins to be seamlessly accessed and traded.

### Issuance, Redemption, and Transfer

GMO Trust provides a simple and easy-to-use platform for our customers to receive and redeem GYEN or ZUSD.

GYEN or ZUSD will be issued only when the corresponding fiat collateral has been deposited onto our platform. The exact amount of GYEN or ZUSD will be issued with an exchange rate of 1:1 after we confirm the fiat deposit. Similarly, only when we confirm the deposit of GYEN or ZUSD to our platform, will we begin the process of redemption with an exchange rate of 1:1 into fiat currency.

In addition to issuance and redemption directly from and to GMO Trust, we will partner with other liquidity providers such as institutional and retail exchanges, market makers, OTC desks and other large institutions to provide liquidity for GYEN and ZUSD.

## **TECHNOLOGY**

### One-to-One Reserve Backed ERC-20 Token

GMO Trust developed two separate ERC-20 stablecoins, one of which is backed 1:1 by the U.S. Dollar and the other backed one-to-one by the Japanese Yen. As the demand for 1:1 reserve backed stablecoins has already been proven by the market, we believe the JPY market is a significant, currently underserved opportunity for growth.

### Powered by Ethereum Blockchain

ERC-20 is a technical standard used for smart contracts on the Ethereum blockchain for implementing tokens. The majority of tokens issued on the Ethereum blockchain are ERC-20 compliant. As of January, 2021, more than 353,000 ERC-20 compatible tokens are found on Ethereum main network.<sup>1</sup>

Ethereum is a world computer running on 7,600+ computer nodes distributed worldwide. The Ethereum network runs on a blockchain secured by miners executing a Proof of Work consensus algorithm, with plans to move to a Proof of Stake consensus algorithm. Small programs called smart contracts are run in exactly the same way on each of these nodes.<sup>2</sup> A smart contract is a computer protocol intended to digitally facilitate, verify, or enforce the negotiation or performance of a contract. Smart contracts allow the performance of credible transactions without third parties. These transactions are

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<sup>1</sup> ERC-20 <https://en.wikipedia.org/wiki/ERC-20>

<sup>2</sup> The Ethereum Wiki [https://theethereum.wiki/w/index.php/Main\\_Page](https://theethereum.wiki/w/index.php/Main_Page)

trackable and irreversible, meaning that the integrity of the data and execution of computer-based procedure is preserved and unaltered.<sup>3</sup>

GYEN and ZUSD are issued via an ERC-20 based smart contract, ensuring that our stablecoins operate under specified rules in a computer-programmed sequence, helping to eliminate human error. The majority of digital asset trading, storage and transfer venues widely support the ERC-20 protocol, enabling immediate integration and support for our stablecoins. While GMO Trust serves as the issuance and redemption mechanism, other transactions in our stablecoins take place on the Ethereum network without the need for third-party financial intermediaries. Account balances, the supply of tokens, and on-chain activities are publically available on the Ethereum blockchain.

The contract code for GYEN and ZUSD is available for review here: <https://github.com/trust-zcom/gmotrust-stablecoin-contract>. Our ERC-20 contracts have been audited by Quantstamp to ensure its proper functionality and security.

## **CONTRACT SECURITY**

Our system implements the following security features:

- 1) Offline keys: Specific keys like Owner, Deployer, Capper, etc., that approve high-risk actions are stored offline.
- 2) Dispersive keys: We use shamir's secret sharing to disperse our important keys into different locations.
- 3) Approval Limits: For transactions sent from GMO Trust to an external third party, approval limits are in place to prevent large movements without appropriate permission settings and approvals.

## **USE CASES**

As the digital asset ecosystem continues to evolve, there are several near-term use cases which have sizable transaction markets already. Short-term use cases differ significantly from the longer-term use cases that we envision materializing.

### Near Term Use Cases

1. Volatility Hedging: Institutional and retail traders often protect downside movements by converting into a stable value asset during periods of extreme volatility. The vast majority of digital assets are highly volatile, with GYEN and ZUSD providing a near-instant hedge without the fees and inefficiencies of fiat conversion.

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<sup>3</sup> Smart contract [https://en.wikipedia.org/wiki/Smart\\_contract](https://en.wikipedia.org/wiki/Smart_contract)



2. **Payment for Other Digital Assets:** We believe that more and more assets will move onto the blockchain, including both hard assets and traditional securities. Digitized versions of fiat (e.g. stablecoins) will serve as the primary method for purchasing and redeeming these assets.
3. **Fiat Equivalent for Trading:** Currency trading strategies are popular methods to gain yield and/or hedge for institutional and retail traders. As we expand currency pairs, traders will be able to leverage these strategies with the efficiencies of blockchain-based fiat.
4. **Clearing/Settlement:** GMO Trust's stablecoins remove the restrictions inherent to the current financial ecosystem, allowing 24/7/365 settlement of assets with digitized fiat currency.
5. **Alternatives to Market Incumbents:** GMO Trust offers a fully regulated, 1:1 asset backed solution, which could replace unregulated, partially collateralized stablecoins currently dominating the marketplace.

### Longer Term Use Cases

1. **Cross-Border Remittance:** GYEN will function as a standard global payment and money transfer solution for the Yen-based economy (and ZUSD will serve the same function for the USD-denominated economy). Today's payment infrastructure is plagued by high fees and slow speeds, with average fees of \$35 plus foreign exchange rates, and 2-5 business days in settlement time. We seek to greatly reduce these.
2. **Money Transfers:** Our stablecoins are digital assets that can be easily and securely transferred anywhere at anytime, serving the global economy as a trustworthy medium of exchange with a universal understanding of its fiat-based peg.
3. **Utility Trading:** GYEN and ZUSD can be efficiently utilized for peer-to-peer ("P2P") energy trading transactions. We anticipate that this practice will increase as traditionally centralized services in the global economy move towards P2P transactions.
4. **DApp Ecosystem:** Decentralized apps, or DApps are applications that leverage blockchain technology to perform a service. The decentralized nature of a blockchain is what permits the creation of decentralized apps, and they are increasing in popularity. A stablecoin is particularly attractive for DApps, as it allows users to pay for goods and services with a token that is not volatile, so users can trust and use it. Likewise, merchants can accept it with a high degree of confidence that it will not suddenly drop in value the next day.
5. **Banking the Unbanked:** Many developing countries are suffering from financial crises or hyperinflation, leading people to lose trust in their countries' fiat currencies. Digital assets can potentially provide a trustworthy store of value to individuals in these countries, as well as unbanked individuals. According to the latest research by [Global Findex](#), 1.7 billion adults do not have a bank account which accounts for 31% of the global adult population.
6. **Trade Finance:** Addressing trade financing issues for micro small scale and medium enterprises (MSMEs) is solvable through blockchain-enabled payment and settlement solutions. Our stablecoins can serve as the asset to better service

trade-financing solutions for MSMEs.

7. Exchanges and Decentralized Finance: We will seek to offer DeFi options through our exchanges and DeFi applications partners.

## **CONCLUSION**

GMO Trust will leverage blockchain technology to provide a global payment, money transfer, trading, clearing and settlement solution that eliminates the inherent volatility associated with traditional digital assets. GMO Trust will accomplish this through leveraging trusted technology (ERC-20 protocol), enhanced regulatory oversight, and 1:1 issuance and redemption in both the Japanese Yen and U.S. Dollar. Our digital assets will bridge the technology, trust and efficiency benefits of the blockchain with the trustworthiness and stability of traditional currencies.

## **DISCLAIMER**

GMO Internet, Inc. is the parent company of GMO-Z.com Trust Company, Inc. GMO-Z.com Trust Company, Inc. is approved and licensed by New York Department of Financial Services.