

An aerial photograph of a modern city skyline, likely Dubai, featuring several prominent skyscrapers. The most prominent building on the left is the Burj Khalifa, with its distinctive tiered, pointed top. Other skyscrapers with various architectural designs and glass facades are visible in the background. A multi-lane highway with a flyover is visible in the lower right portion of the image. The sky is clear and blue, suggesting a bright day.

Tokenization Playbook 2024

Rohas Nagpal

It's 2025 and you are relaxing on your favorite beach. You whip out your smartphone and within minutes you've...

...bought shares in an innovative startup halfway across the world

...traded a fraction of a Picasso painting for a fantastic pair of collectible sneakers

...invested in the copyright license of your favorite movie

...swapped your gold & platinum holdings for fractional ownership of a private plane and a cruise liner...

...invested in fractional ownership of an office building in an upcoming high-rent location...

That's the power of tokenization, and it starts with this book.

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Asset Tokenization can 10x the Crypto Market!

A Boston Consulting Group (BCG) report predicts that the total size of illiquid asset tokenization globally would be \$16 trillion by 2030.

Considering that the total market capitalization of Crypto is currently 1.6 trillion, that's an amazing 10x opportunity!

About the Author

Rohas Nagpal is the **Chief Blockchain Architect** of Hybrid Finance Blockchain (HYFI).

He began his career as a hacker in the early 1990s, In 1999, he co-founded the **Asian School of Cyber Laws**, dedicating 16 years to cyber investigation and cyber law.

His work spanned **18 countries**, investigating cyber crimes & data breaches for hundreds of organizations across sectors like aerospace, banking, law enforcement, pharma & shipping.

During this time, he also assisted the **Government of India** in framing draft rules under the Information Technology Act.



He also authored the **Cyber Crime Investigation Manual**, hailed as a "bible for cybercrime investigators" by the Times of India.

In 2016, he co-founded **BankChain**, a community of **37 banks + IBM, Microsoft, and Intel**. The core product was a self-building blockchain ecosystem with a web app, PWA & Blockchain REST API service.

He has also been a consultant for the **Reserve Bank Innovation Hub** for preparing a Whitepaper on Non-Fungible Tokens (NFT) and Central Bank Digital Currency (CBDC).

He writes a weekly newsletter for **Mint**, advise several Blockchain startups, and has developed the **Blockchain Token Valuator**.

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During the preparation of this work, I have used ChatGPT in order to make the information more engaging and simpler to read. After using this tool / service, I have reviewed and edited the content as needed.

1. Understanding Blockchain

1.1 Blockchains are Internets of Value

The conventional internet uses protocols like TCP/IP and SMTP to move data across the globe in seconds (email, video pdf, text, messages, etc).

Blockchains enable the movement of value across the world in seconds.

This value can be cryptocurrencies like Bitcoin and Monero or tokenized versions of real-world assets like airplanes, carbon credits, real estate, whisky casks etc.

Tokenization of real-world assets is the most important Blockchain use case.

Blockchains can minimise fraud and maximise efficiency, security & transparency in supply chains, healthcare, global money systems, financial technologies, democratic elections, auction of public assets, energy trading, electronic record authentication, delivery of Government services, IoT and much much more.

Quick facts

- 1.** Blockchain technology was invented by the unknown inventor of the **Bitcoin** crypto-currency in 2008. Simply put, the bitcoin crypto-currency runs on the bitcoin blockchain – a public blockchain where anyone can become a miner and details of every single bitcoin transaction are stored on each node.
- 2.** Blockchain is an innovative mix of decades old, tried and tested technologies including **Public key cryptography** (1970s), Cryptographic **hash functions** (1970s) and **proof-of-work** (1990s).
- 3.** Blockchains are **provably immutable** and enable the rapid transfer and exchange of crypto-tokens (which can represent assets) without the need for separate clearing, settlement & reconciliation.
- 4.** Blockchains can handle **data authentication & verification** very well. This includes immutable storage (data stored on a blockchain cannot be changed or deleted), digital signatures and encryption. Data in almost any format can be stored in the blockchain.
- 5.** Blockchains can create public-private key pairs and also be used for generating and verifying **digital signatures**.

6. Blockchains can handle **smart asset lifecycle management** very well. This includes issuance, payment, exchange, escrow, and retirement of smart assets.

7. Blockchains **do not have a single point of control** or a **single point of failure**.

8. For organizations, blockchain technology can minimize fraud; accelerate information and money flow; greatly improve auditability and streamline processes.

9. The original blockchain, which powers the Bitcoin crypto-currency, used proof of work as a **consensus mechanism**.

But today there are multiple distributed ledger systems that offer a host of consensus mechanisms such as Proof of stake, Byzantine fault tolerant, Deposit based consensus, Federated Byzantine Agreement, Proof of Elapsed Time, Derived PBFT, Redundant Byzantine Fault Tolerance, Simplified Byzantine Fault Tolerance, Federated consensus, Round Robin and Delegated Proof of Stake.

10. Blockchain solutions can be **permissioned** or **permissionless**. Blockchain solutions can also be **private, public** or **hybrid**.

1.2 Types of Blockchains

Blockchains can be of various types:

Layer-1 Blockchains: These blockchains validate & execute transactions without the need for any external network. Examples: Bitcoin, Ethereum, HYFI Blockchain.

Layer-2 Blockchains: These blockchains are "sidechains" built on top of Layer-1 blockchains. The underlying Layer-1 (e.g. Ethereum) provides decentralization & security, while the Layer-2 (e.g. Polygon PoS) provides scalability.

Permissionless blockchains: Anyone can participate on public / permissionless blockchains without restrictions. Examples: Bitcoin, Litecoin, Ethereum.

Permissioned blockchains: Various controls can be set in a private / permissioned blockchain.

Example: Hybrid Finance Blockchain (HYFI) where permissions such as connect, send, receive, issue, create, mine, activate, and admin can be set.

1.3 Atomic Exchange Transactions

Think of a blockchain transaction like a multi-tasker. It can handle many deals at once, each going to different blockchain addresses.

For example, it can do two things in one go: send dollars from person A to B, and at the same time, send Euros from B to A. This is like a swap, but it's super secure.

The best part? Everything in the transaction happens all at once or not at all. This makes sure that both sides of the deal are completed together, which is really important in finance.

This is called a "delivery-versus-payment" or DvP transaction.

For a **technical deep-dive** into how Atomic Exchange Transactions work, watch this video:

<https://www.youtube.com/watch?v=li9guOpF9oI>

1.4 Smart Contracts

A smart contract is a computer program that automatically executes the terms of a contract when certain conditions are met.

These conditions are written into the code of the contract, and when they are met, the contract executes.

These terms can include anything that two or more parties would agree to in a traditional contract e.g. terms of payment, delivery date, quality of a product or service, etc.

Smart contracts are stored on a blockchain. This makes them transparent, secure & immutable.

Example: If the terms of the contract state that payment will be made upon delivery of the product, the smart contract will automatically transfer the funds to the seller's account when the delivery is confirmed.

Smart contracts can interact with other systems & technologies through the use of external data **oracles**. They provide smart contracts with access to real-world information such as prices, weather conditions, etc.

Smart contracts v traditional contracts

Smart contracts differ from traditional contracts in 3 ways.

Smart contracts are digital contracts that are self-executing and operate based on predefined rules encoded in computer programs.

On the other hand, traditional contracts are written in natural language and require legal interpretation and enforcement by a third party.

Smart contracts operate on blockchain technology, which provides a distributed and decentralized ledger that is transparent, immutable, and secure.

In contrast, traditional contracts are typically stored in centralized systems that are susceptible to manipulation.

Smart contracts are designed to automate processes & eliminate intermediaries, resulting in faster & more efficient transactions.

Traditional contracts, on the other hand, often require manual processing and involve multiple parties, which can result in delays, errors & disputes.

The biggest advantage of Smart Contracts

The biggest advantage of smart contracts is that they are self-executing, which means that there is no need for a third party to enforce the terms of the contract.

This makes smart contracts faster, cheaper & more efficient than traditional contracts.

1.5 Blockchain Selection Checklist

A Blockchain is suitable for tokenization use cases if it satisfies these criteria:

- ❑ **Verified Node Operators from Compliant Jurisdictions:** Nodes must be operated by entities verified in jurisdictions compliant with the Financial Action Task Force (FATF).
- ❑ **Robust KYC, AML, and CFT Policies:** Node operators should have strong policies for customer identification and verification, anti-money laundering (AML), and countering the financing of terrorism (CFT).
- ❑ **Regulatory Real-time Monitoring:** Availability of nodes for regulators to monitor activities in real-time.
- ❑ **Permissioned Addresses Based on KYC Level:** Granting permissions to each blockchain address according to the level of Know Your Customer (KYC) compliance.

- ❑ **Comprehensive Regulatory Support:** Full support for KYC, AML, CFT, consumer protection, right-to-be-forgotten regulations, and data privacy.
- ❑ **Asset Freeze and Unfreeze Capabilities:** Ability to freeze and unfreeze assets based on legal orders.
- ❑ **Direct Regulatory Control Over Assets:** Allow regulators to directly freeze and unfreeze assets using dedicated nodes.
- ❑ **Business, Compliance, and Regulatory Oversight Support:** Adequate features for supporting business operations while complying with regulatory frameworks.
- ❑ **Off-Chain Data Purging:** Support for the selective removal of off-chain data to comply with right-to-be-forgotten regulations.
- ❑ **Secure Peer-to-Peer Connections:** Fully encrypted P2P connections to ensure data privacy.
- ❑ **External Private Key and Multi-Signature Support:** Enabling the use of external private keys and multi-signatures for enhanced security.
- ❑ **Cold Node Availability:** Provision for cold nodes to keep private keys offline, reducing the risk of unauthorized access.

- ❑ **High Transaction Throughput:** Capability to handle large volumes of transactions efficiently.
- ❑ **Low Block Time for Efficiency:** Reduced latency with low block time to enhance transactional efficiency.
- ❑ **Integration with External Applications:** Ease of integration with other applications through standardized interfaces like JSON-RPC API.
- ❑ **Scalability and Future-Proofing:** Ability to scale and adapt to future technological advancements and regulatory changes.
- ❑ **Energy Efficiency:** Consideration of the blockchain's energy consumption, particularly for environmentally sustainable operations.
- ❑ **Disaster Recovery and Data Redundancy:** Robust mechanisms for disaster recovery and data redundancy to prevent data loss.
- ❑ **Customizable Smart Contract Templates:** Availability of customizable templates for smart contracts to cater to diverse tokenization needs.
- ❑ **Audit Trails and Transparency:** Comprehensive audit trails for transactions to ensure transparency and ease of auditing.

- ❑ **Cross-Border Compliance:** Capability to comply with international regulations and facilitate cross-border transactions.

- ❑ **Interoperability with Other Blockchains:** Facilitating the seamless transfer of assets across different blockchain networks.

- ❑ **User Privacy Protection:** Mechanisms to protect user privacy without compromising regulatory compliance.

1.6 Decentralized Finance (DeFi)

Decentralized Finance (DeFi) is an umbrella term for financial applications powered by blockchain technology.

Apart from Tokenization of Real World Assets, some of the important DeFi categories are:

1. Bridges
2. Collateralized Debt Positions
3. Derivatives
4. Decentralized Exchanges
5. Farms
6. Indexes
7. Lending
8. Liquid Staking
9. Options
10. Oracles
11. Payments
12. Prediction Markets
13. Staking
14. Synthetics
15. Yield
16. Yield Aggregators

1. Blockchain Bridges

A bridge receives one type of crypto, locks it as a deposit, and then "mints" an equal amount of another crypto and releases it on another blockchain.

Examples: Wrapped Bitcoin (WBTC), Multichain, and Just Cryptos (JST).

2. Collateralized Debt Positions

Collateralized Debt Positions (CDPs) are protocols that mint their own stablecoins using collateral.

Examples: MakerDAO (MKR), JustStables (USDJ).

3. Derivatives

Derivatives are Smart Contracts that get their value, risk, and basic structure from an underlying asset.

Examples: Synthetix (SNX), Keep3r Network (KP3R), dYdX (DYDX).

4. Decentralized Exchanges

Decentralized Exchanges (Dexes) are protocols that enable users to swap / trade cryptos without the need for KYC (Know Your Customer) processes.

Examples: Uniswap (UNI), Curve (CRV), PancakeSwap (CAKE).

5. Farms

Farms lock money in exchange for their token.

Examples: TokensFarm, ZoomSwap (ZM), and Goose Finance (EGG).

6. Indexes

Indexes are protocols that track the performance of a group of related assets.

Examples: Set Protocol, Index Coop (INDEX), Enzyme Finance (MLN).

7. Lending

Lending protocols enable users to borrow and lend cryptos.

Examples: AAVE, JustLend (JST), and Compound (COMP).

8. Liquid Staking

Liquid staking rewards liquidity for staked assets.

Example: Lido (LDO), Rocket Pool (RPL), and Marinade Finance (MNDE).

9. Options

Options are protocols that give you the right to buy or sell crypto at a pre-decided price.

Examples: Oryn, Ribbon Finance (RBN), and Friktion.

10. Oracles

Oracles are protocols that bring information from the outside to the blockchain and vice versa.

Examples: Nest Protocol (NEST), WitSwap (eWIT), and Umbrella Network (UMB).

11. Payments

Payment protocols enable the payment / sending / receiving of cryptos.

Examples: Flexa (AMP), Sablier Finance, and Lightning Network.

12. Prediction Markets

Prediction Markets are protocols that enable wagering/betting in future events.

Examples: Polymarket, Azuro, and BetHash (HASH).

13. Staking

Staking protocols reward users for “holding” their cryptos.

Examples: MoneyOnChain (MOC), Stafi (FIS), and ThetaCash (TBILL).

14. Synthetics

Synthetics are protocols that create tokenized derivatives that mimic the value of other assets.

Examples: Alchemix (ALCX), Injective (INJ), Youves (YOU).

15. Yield

Yield protocols reward users for staking or providing liquidity.

Examples: Convex Finance (CVX), Arrakis Finance, and Alpaca Finance (ALPACA).

16. Yield Aggregators

Yield Aggregators are protocols that aggregate yield from multiple DeFi protocols. *Examples: Yearn Finance (YFI), Beefy (BIFI), and Badger DAO (BADGER).*

2. Understanding Blockchain Tokens

Blockchain Tokens are digital assets that can be traded on a blockchain and are often used:

1. to incentivize participation in the network,
2. to represent a claim on underlying assets, or
3. to serve as a medium of exchange.

2.1 Types of Tokens

From Algorithmic Tokens to Virtual Financial Assets, there are 17 types of Blockchain Tokens.

1. Algorithmic Tokens

Tokens that use an algorithm to vary the supply in order to stabilize price / volatility e.g. UST (now defunct) a so-called algorithmic stablecoin of the Terra ecosystem.

Interestingly, Algorithmic Tokens are prohibited by the Dubai Financial Services Authority (DFSA) - the independent regulator of financial services conducted in or from the Dubai International Finance Centre (DIFC).

2. Asset-backed Tokens

Tokens that are backed by off-chain assets such as fiat currency, agricultural commodities, and precious metals e.g. USD Coin (USDC), and PAX Gold (PAXG).

3. Crypto Currencies

Tokens that can be used to buy and sell products & services or which can be quickly converted to 'cash' e.g. Bitcoin (BTC), Litecoin (LTC), Bitcoin Cash (BCH).

4. Crypto-backed Tokens

Tokens backed by on-chain assets such as cryptocurrencies e.g. Wrapped Bitcoin (WBTC).

5. DeFi Tokens

Tokens that are part of Decentralized Finance (DeFi) protocols such as Collateralized Debt Positions (CDP). For more about DeFi, see this post: [What is DeFi?](#)

6. DFSA Recognized Crypto Tokens (Dubai)

Tokens recognized by Dubai Financial Services Authority (DFSA) - the independent regulator of financial services conducted in or from the Dubai International Finance Centre (DIFC): Bitcoin (BTC), Litecoin (LTC), and Ether (ETH).

7. Exempt NFTs (India)

Tokens that are exempt from taxation as NFTs in India - whose transfer results in the enforceable transfer of ownership of underlying tangible assets.

8. Exempt Virtual Digital Assets (India)

Tokens exempt from taxation as VDAs in India - gift cards & vouchers, mileage points, reward points, loyalty cards, and subscriptions to websites, platforms, and applications.

9. Fractional Licenses of Intellectual Property (FLIPs)

Tokens that represent the whole or part of licenses relating to copyright, industrial designs, patents, and trademarks.

10. Governance Tokens

Tokens that give holders a vote in a project's development e.g. Uniswap (UNI), Hybrid Finance Blockchain (HYFI).

11. Non-fungible Tokens (NFTs)

NFTs are unique digital assets representing ownership or proof of authenticity of one-of-a-kind items.

12. Open Blockchain Tokens (Wyoming, US)

Tokens issued under Wyoming, US law HB0070 - Open blockchain tokens-exemptions e.g. Wrapped Asset Project (WRAP).

13. Privacy-enhanced Currencies

Tokens that are either private by default or which allow the activation of privacy functionality e.g. Monero (XMR).

Interestingly, Privacy-enhanced Currencies are prohibited by the Dubai Financial Services Authority (DFSA) - the independent regulator of financial services conducted in or from the Dubai International Finance Centre (DIFC).

14. Public Blockchain Natives

Tokens that are used for paying fees for usage of a public blockchain e.g. Ether (ETH).

15. Security Tokens

Tokens that represent equity or ownership of a company.

16. Utility Tokens

Tokens that are part of a specific use case e.g. Filecoin (FIL) which is the incentive layer of the IPFS decentralized storage ecosystem.

17. Virtual Financial Assets (Malta)

Tokens that are recognized under the Virtual Financial Assets Act of Malta e.g. Chiliz (CHZ).

2.2 Blockchain Token Metrics

Blockchain Token Metrics are essential indicators that help investors & traders understand the performance & potential of blockchain tokens.

Blockchain Token Metrics are primarily divided into 10 categories:

1. Supply Metrics
2. Capitalization Metrics
3. Volume Metrics
4. Price Metrics
5. Holders' Statistics
6. RoI Metrics
7. DeFi Metrics
8. Consensus Metrics
9. Staking Metrics
10. Mining Metrics

2.2.1 Supply Metrics

Supply Metrics comprise:

1. Circulating Supply
2. Total Supply
3. Maximum Supply
4. Inflation
5. Stock to Flow
6. Vladimir Club Cost

1. Circulating Supply

Circulating supply refers to the number of tokens that are publicly available and actively circulating in the market. It represents the portion of the total supply that investors can buy, sell, or trade.

The circulating supply can change over time due to various factors such as:

1. mining,
2. staking,
3. burning, or
4. token release schedules.

Circulating supply is a crucial metric because it directly impacts a token's market capitalization (market cap).

Market cap is calculated by multiplying the current market price of a token by its circulating supply.

Market cap = Current Price x Circulating Supply

This value helps investors compare the relative size & worth of different tokens, providing insights into their potential risk & return profiles.

A lower circulating supply may suggest scarcity and higher demand, possibly leading to a price increase.

Conversely, a higher circulating supply could indicate that a token is more readily available, potentially making it less valuable.

2. Total Supply

Total Supply refers to the number of tokens in existence, including those in circulation and those held in reserve, locked, or not yet released.

The total supply may change over time as new tokens are mined or created, or existing tokens are burned or destroyed.

3. Maximum Supply

Maximum Supply is the predetermined maximum number of tokens that will ever exist for a project.

Once the maximum supply is reached, no new tokens will be created. This limit is often imposed to maintain scarcity & value.

Examples:

- Bitcoin: 21 million
- Ether: Unlimited
- HYFI: 1 billion

4. Inflation

Inflation refers to the increase in the supply of a particular token over time, which can affect its value & purchasing power.

Unlike traditional currencies managed by central banks, blockchain tokens often have predetermined issuance schedules and supply limits coded into their protocols.

Inflation in tokens typically occurs through the process of mining or staking, where new coins are issued as rewards to participants who validate transactions and secure the network.

Inflation = Projected 12-month increase in CS / Current CS

The rate of inflation varies across different projects, depending on their issuance model, block rewards, and supply caps.

In proof-of-work (PoW) tokens like Bitcoin, new coins are created through **mining**, where miners compete to solve complex mathematical problems to add new blocks to the blockchain.

The successful miner receives a block reward in the form of newly minted coins, contributing to the increase in circulating supply.

In proof-of-stake (PoS) and delegated proof-of-stake (DPoS) tokens like Ether, new coins are issued to validators or delegators who lock up or "**stake**" their coins in the network.

The new coins are distributed as rewards for validating transactions and maintaining network security.

Inflation can have several effects on the value & dynamics of tokens:

- **Dilution of Value:** When new coins are issued through mining or staking, the value of existing coins may be diluted, potentially impacting long-term holders.
- **Incentive for Network Participants:** Inflation can serve as an incentive for miners, validators, and stakers to participate in the network, promoting decentralization and security.

- **Deflationary Mechanisms:** Some tokens, like Bitcoin, employ deflationary mechanisms such as halving events, where block rewards are reduced over time. This approach can counteract inflation, ensuring scarcity and potentially increasing the value of the digital asset.

5. Stock to Flow (S2F)

The Stock to Flow model is a widely-used valuation tool for commodities like gold & silver, and it has been adapted to analyze cryptocurrencies like Bitcoin.

It is a ratio that compares the existing supply (stock) of an asset to its annual production rate (flow).

$$S2F = \text{Stock} / \text{Flow}$$

Stock to Flow = Current CS / Projected 12-month increase in CS

In the context of cryptocurrencies, the stock represents the circulating supply of coins, while the flow refers to the rate at which new coins are created (e.g., through mining).

According to the S2F model, an asset's value is directly related to its scarcity, with a higher S2F ratio indicating greater scarcity and potentially higher value.

6. Vladimir Club Cost

The Vladimir Club is the cost of owning 1% of 1% of a crypto's eventual supply.

Example: Bitcoin's maximum supply is 21 million coins. To be "in the Vladimir Club" for Bitcoin, you would need $21 \text{ million} \times 0.01 \times 0.01$ i.e. 2100 BTC.

2.2.2 Capitalization Metrics

Capitalization Metrics comprise:

1. Market Capitalization
2. Fully Diluted Market Capitalization

1. Market Capitalization

Market Capitalization is an extensively used metric to measure the relative size of a token. It is calculated by multiplying the current market price of a token by the total number of tokens in circulation.

Market Capitalization = Circulating Supply x Current Price

It's a simple way to gauge the worth of a token, and it also helps investors make decisions about investing in one token over another. However, it's important to note that a high market cap does not necessarily mean a token is more valuable; it just means it's more widely held.

Historically, Bitcoin (BTC) has always had the highest market capitalization and Ethereum the second highest. If this reverses, it would be called the Flippening.

2. Fully Diluted Market Capitalization

Fully Diluted Market Capitalization (FDMC) is a variant of market cap that takes into account the maximum possible number of tokens that can exist for a particular token. This includes tokens that have already been released or mined, but also tokens that have been announced but not yet released into circulation.

In simple words, FDMC is the market capitalization if the maximum supply was in circulation.

$$FDMC = Price \times Max\ Supply$$

If the maximum supply is unknown or unlimited, like in ETH, then:

$$FDMC = Price \times Total\ Supply$$

If the maximum supply and total supply are both unlimited, then we can't calculate the FDMC.

FDMC gives an indication of the potential value of a token, should all the potential tokens be released.

This is particularly useful for new projects where the total supply of tokens is not yet in circulation. Investors can use this as a tool to understand the possible future value of a token.

Comparing Market Cap & FDMC

While both these metrics provide useful insights, they serve different purposes.

Market cap gives a snapshot of a token's current value in the market, while FDMC aims to show its potential value in the future.

A significant gap between the two could indicate a large number of tokens waiting to be released into the market. This could lead to a dilution of token value in the future, and investors must take this into account.

2.2.3 Volume Metrics

Volume Metrics comprise:

1. Trading volume
2. Transaction volume
3. Volume to MarketCap Ratio
4. Velocity

1. Trading volume

Trading volume refers to the total quantity of a specific token that is traded within a given time frame.

If the trading volume is high, it suggests that the token is highly liquid and popular among investors.

Conversely, a low trading volume might indicate a less popular token or potentially low liquidity.

The trading volume provides insight into the market activity surrounding a blockchain token. It is a critical gauge of investor sentiment and market confidence.

Example: A sudden spike in trading volume could suggest a significant market event or news about the token, such as a new partnership or technological upgrade.

2. Transaction volume

Unlike trading volume, which focuses on exchange-based trading, transaction volume refers to the total quantity of tokens transferred on the blockchain network.

This metric is not limited to trading activities on exchanges but also includes all token transfers happening on-chain.

A token with a high transaction volume signifies that it is widely used in the network for various transactions, including, but not limited to, smart contract interactions, payments, or fees.

This could indicate that the token has a high utility beyond speculative trading, showing its inherent value within the blockchain ecosystem.

3. Volume to MarketCap Ratio

The Volume to MarketCap Ratio is a significant parameter that provides an additional layer of market sentiment analysis.

Volume to MarketCap Ratio (VMR) is calculated by dividing the 24-hour volume by the Market Capitalization. This is also called Volume Turnover (24H).

VMR = 24-hour volume / Market Capitalization

By comparing the trading volume of a token to its market capitalization (the total market value of a token's circulating supply), we can get a sense of the token's liquidity and activity level relative to its size.

A high ratio suggests a high level of trading activity, potentially indicating investor excitement or panic, depending on the market context.

Conversely, a low ratio could mean the token is in a period of relative stability, with fewer transactions happening compared to its overall market size.

4. Velocity

Velocity is a measure of how quickly tokens are moving between wallets in the network. It's calculated by dividing the on-chain transaction volume by the average network value (a rough estimate of the blockchain's market cap).

A higher velocity might indicate that the token is commonly used for transactions and has a high utility in its network. However, high velocity could also suggest that users are not holding onto the token, possibly due to low speculative or inherent value.

Meanwhile, a lower velocity suggests that token holders might be treating the token more as a store of value or a speculative asset, rather than using it for transactions.

2.2.4 Price Metrics

Price Metrics comprise:

1. Price USD
2. Price BTC
3. Open-High-Low-Close prices
4. All-time-high (ATH)
5. All-time-low (ATL)
6. Time from ATH
7. Percentage down from ATH
8. Breakeven Multiple
9. Cycle Low
10. Time Since Low
11. Percentage Up Since Low

1. Price USD

Price USD is the crypto's most recent trading price in US Dollars. Ideally, this should be averaged across multiple credible exchanges. Similarly, there can be Price INR, Price EUR, Price SGD, etc.

2. Price BTC

Price BTC is the current price of a particular cryptocurrency expressed in Bitcoin. Since Bitcoin is the leading cryptocurrency in terms of market cap, other cryptocurrencies are often compared against it to evaluate their value.

This metric allows investors to understand how the specific cryptocurrency is performing in comparison to Bitcoin.

Cryptos can also be quoted in sats / satoshis which is 0.00000001 BTC.

3. Open-High-Low-Close (OHLC) Prices

OHLC is a technique used in charting to represent the opening, closing, highest, and lowest prices of a cryptocurrency during a particular time period, such as an hour, a day, or a month.

Here is what each component means:

Open: The price at which the cryptocurrency began the period.

High: The highest price reached during the period.

Low: The lowest price reached during the period.

Close: The price at which the cryptocurrency ended the period.

These metrics give traders a concise view of the price fluctuations within the chosen period.

4. All-Time-High (ATH)

This metric represents the highest price point that a particular cryptocurrency has achieved in its entire trading history.

This is often used to compare the current price with the peak performance of the asset. It can give a perspective on how far the asset's price has corrected from its previous peak.

You should also check out the high prices over the last 24 hours, 7 days, 30 days, 90 days, and 52 weeks.

5. All-Time-Low (ATL)

The all-time low (ATL) is the lowest price point that a cryptocurrency has reached since it started trading.

Just like the ATH, it gives an idea of the extreme lows that the asset has seen and how much it has recovered since then. You should also check out the low prices over the last 24 hours, 7 days, 30 days, 90 days, and 52 weeks.

6. Time from ATH

This metric measures the time that has elapsed since the cryptocurrency last hit its all-time high.

This can provide insight into the length and severity of bear markets and the potential timing for a recovery to new highs.

7. Percentage Down from ATH

This metric is a measure of how far the current price is from its ATH in percentage terms. It can help gauge the severity of a price correction or crash.

Example: Bitcoin's ATH was \$69,045 and it's currently trading at \$26,278, it is roughly 62% down from its ATH.

8. Breakeven Multiple

The breakeven multiple shows how much the price needs to multiply from its current level to reach its ATH again.

Example: A coin's ATH was \$10 and it is currently at \$2, the breakeven multiple is 5, meaning the price would need to increase 5 times to reach the ATH.

9. Cycle Low

The cycle low refers to the lowest point that a cryptocurrency reaches in its market cycle. Market cycles are characterized by periods of highs (peaks) and lows (troughs).

Identifying the cycle low can provide potential entry points for long-term investment.

10. Time Since Low

Time Since Low is the measure of the time that has passed since the cryptocurrency last reached its cycle low.

It provides an idea of the length of the ongoing bull market and might hint at the expected time left for growth before the next bear market starts.

11. Percentage Up Since Low

This metric shows how much the price has increased from its cycle low in percentage terms. For instance, if a crypto's cycle low was \$30,000 and it's currently trading at \$60,000, it's 100% up from its low.

This metric can provide insights into the current stage of the market cycle and the gains that have been achieved from the last bottom.

2.2.5 Holders' Statistics

Holdings' Statistics comprise:

1. Active Addresses
2. Whales

1. Active Addresses

Active Addresses is the number of unique addresses that participated in a transaction anytime during the past 24 hours.

2. Whales

Whales are addresses that own more than 1% of the circulating supply of a crypto asset. Whale transfers from cold wallets to exchanges and vice versa are very important to track.

2.2.6 ROI Metrics

Return on Investment (ROI) measures the amount of return on a crypto investment, relative to its cost.

$$ROI = Profit / Cost$$

ROI (Return on Investment) Metrics comprise:

1. Short-Term ROI
2. ROI by Year

1. Short-Term ROI

A crypto's ROI is the percentage return over a specific period - 7 days, 30 days, 90 days, 1-year period, etc.

2. ROI by Year

ROIs by Year is the percentage return of a crypto asset from the beginning to the end of a specific year.

2.2.7 DeFi Metrics

DeFi Metrics comprise:

1. Total Value Locked
2. Borrowing volume
3. Capital deployed
4. Protocol revenue
5. Annualized protocol revenue
6. Annualized total revenue
7. Supply-side revenue
8. Token incentives
9. Total revenue
10. Price-to-Earnings (P/E) ratio
11. Price-to-Sales (P/S) ratio

1. Total Value Locked

Total Value Locked (TVL) represents the total value of assets (usually in cryptocurrency) locked within a DeFi protocol or platform.

It is an important metric as it indicates the level of adoption and usage of the protocol. TVL demonstrates the trust and confidence users have in a particular protocol.

For example, if MakerDAO (MKR) has a TVL of \$6.29 billion, it means that users have collectively locked \$6.29 billion worth of assets within that protocol.

2. Borrowing volume

Borrowing Volume measures the total amount of funds borrowed from a DeFi protocol.

It reflects the demand for borrowing services within the ecosystem and can indicate the activity level and growth of the protocol.

This usually applies to these categories:

1. **Lending Protocols** that enable users to borrow and lend assets.
2. **Leveraged Farming Protocols** that enable users to leverage yield farms with borrowed money.
3. **Uncollateralized Lending Protocols** that enable users to lend against known parties that can borrow without collateral.

3. Capital deployed

Capital Deployed refers to the amount of funds invested or utilized within a specific DeFi protocol or project.

It includes funds used for lending, liquidity provision, or other activities within the protocol.

For example, if investors have deployed \$10 million in a decentralized exchange to provide liquidity for trading pairs, that \$10 million represents the capital deployed within that exchange.

4. Protocol revenue

Protocol Revenue measures the income generated by a DeFi protocol. It typically includes fees earned from lending, borrowing, trading, or other services offered by the protocol.

For instance, if a decentralized lending platform charges a 1% fee on each loan, and the platform has facilitated \$1 billion in loans, the protocol revenue would amount to \$10 million (1% of \$1 billion).

5. Annualized protocol revenue

Annualized Protocol Revenue represents the projected or estimated revenue of a DeFi protocol over a one-year period.

It provides a normalized view of revenue and helps compare protocols on an annual basis.

To calculate this metric, the protocol revenue generated within a specific period is multiplied by the number of periods in a year.

For example, if a DeFi protocol generates \$1 million in protocol revenue in a month, the annualized protocol revenue would be \$12 million ($\$1 \text{ million} * 12 \text{ months}$).

6. Annualized total revenue

Similar to annualized protocol revenue, Annualized Total Revenue represents the projected or estimated total revenue of a DeFi protocol, including all revenue sources such as fees, token incentives, or other income streams.

It takes into account all sources of income generated by the protocol within a specific period and extrapolates it to estimate the total revenue over a year.

7. Supply-side revenue

Supply-Side Revenue refers to the revenue generated from providing liquidity or assets to a DeFi protocol, such as earning interest or fees as a liquidity provider in a decentralized exchange.

For example, in a lending protocol, liquidity providers earn interest on their supplied assets, and that interest serves as supply-side revenue.

8. Token incentives

Token Incentives are rewards provided to users who participate in a DeFi protocol, often in the form of the protocol's native tokens. These incentives can include token distributions, staking rewards, or other mechanisms to encourage participation & engagement.

For instance, a DeFi protocol might distribute tokens as rewards to users who provide liquidity or stake their tokens within the protocol.

9. Total revenue

Total Revenue encompasses all sources of income generated by a DeFi protocol, including protocol revenue, supply-side revenue, token incentives, and other revenue streams.

It provides a holistic view of the overall revenue generated by the protocol. Calculating the total revenue involves summing up all the different revenue streams of the protocol.

10. Price-to-Earnings (P/E) ratio

This is the fully diluted market cap (FDMC) divided by annualized protocol revenue (APR).

$$P/E = FDMC / APR$$

11. Price-to-Sales (P/S) ratio

Price-to-Sales (P/S) ratio is the fully diluted market cap (FDMC) divided by annualized total revenue (ATR).

$$P/E = FDMC / ATR$$

Notes about P/E and P/S ratios:

Some protocols have only supply-side revenue and hence their P/E ratio cannot be calculated.

Example: In Uniswap (UNI), all the trading fees go to the liquidity providers (supply-side).

Some protocols have only protocol revenue and hence their P/S and P/E ratios are the same.

Example: In MakerDAO (MKR), all interest payments go to the protocol and are distributed to MKR holders through buybacks.

Some protocols have both supply-side & protocol revenue and hence their P/S & P/E ratio are both available.

Example: In Compound (COMP), interest payments are divided between lenders (supply-side) & the protocol's treasury which is managed by token holders.

2.2.8 Consensus Metrics

Consensus Metrics comprise:

1. Targeted Block Time
2. Block Reward

1. Targeted Block Time

Targeted Block Time is the targeted time interval between two blocks. This is usually measured in seconds and is defined by the blockchain's specifications. The actual block time usually differs from this.

2. Block Reward

The block reward is the newly minted coins that are awarded to the miner / validator / creator of a new block. This does not include the transaction fees that are awarded by the blockchain.

2.2.9 Staking Metrics

Staking Metrics comprise:

1. Annualized Staking Yield
2. Real Annualized Staking Yield
3. Tokens Staking
4. Percentage Network Staking
5. Staking Minimum

1. Annualized Staking Yield

Annualized Staking Yield represents the projected or estimated yield earned by staking tokens over a one-year period.

It is a measure of the return on investment (ROI) for staking activities. Staking involves locking or holding tokens in a blockchain network to support its operations and secure the network.

Staking rewards can be in the form of additional tokens or a percentage of transaction fees. Annualized Staking Yield helps investors and users assess the potential earnings they can expect from staking their tokens over a longer timeframe.

2. Real Annualized Staking Yield

Real Annualized Staking Yield refers to the actual or realized yield earned by staking tokens over a one-year period.

It is the yield that has been earned and received by stakers during the specified timeframe.

Real Annualized Staking Yield takes into account any fluctuations or changes in staking rewards and provides a more accurate reflection of the actual returns from staking activities.

3. Tokens Staking

Tokens Staking represents the number of tokens that are currently being staked within a blockchain network or staking platform.

Staked tokens are typically locked for a certain period and cannot be freely traded or transferred during the staking period.

The number of tokens staked provides insight into the level of participation and engagement of token holders in the staking process.

4. Percentage Network Staking

Percentage Network Staking represents the proportion of total tokens in circulation that are currently being staked within a blockchain network.

It is calculated by dividing the total number of tokens staked by the total supply of tokens.

This metric helps gauge the level of network security and decentralization, as higher levels of staked tokens indicate a stronger network with a larger portion of tokens being actively used for securing the network.

5. Staking Minimum

Staking Minimum refers to the minimum number of tokens required to participate in the staking process.

Some blockchain networks or staking platforms set a minimum threshold that users must meet to be eligible for staking rewards.

The staking minimum ensures that participants meet certain criteria and have a sufficient stake in the network to contribute effectively.

2.2.10 Mining Metrics

Mining Metrics comprise:

1. Hash Rate
2. Percentage on Nicehash
3. Attack Cost (1H)
4. Attack Cost (24H)
5. Next Halving Date

1. Hash Rate

Hash Rate refers to the computational power or processing speed of a blockchain network or cryptocurrency mining operation.

It measures the number of hashes (calculations) a network can perform per second.

A higher hash rate indicates a more secure and robust network, as it requires more computational power to successfully mine new blocks or perform cryptographic operations.

The hash rate is often measured in hashes per second (H/s), kilohashes per second (KH/s), megahashes per second (MH/s), or even terahashes per second (TH/s) for more powerful networks.

2. Percentage on NiceHash

Nicehash is a popular marketplace that connects sellers (miners) of hashing power with buyers who need it for various purposes.

Percentage on Nicehash represents the portion of the overall hash rate of a particular cryptocurrency network that is being rented or contributed through the Nicehash platform.

The percentage on Nicehash provides insight into the extent to which miners are utilizing the Nicehash platform to monetize their hashing power.

3. Attack Cost (1H)

Attack Cost (1H) refers to the estimated cost required to perform a 51% attack on a blockchain network for a duration of one hour.

A 51% attack refers to a scenario where a malicious entity or group gains control over the majority (51% or more) of the network's total hash rate.

This control allows the attacker to potentially manipulate transactions, double-spend coins, or disrupt the network's operations.

Attack Cost (1H) helps assess the security and resilience of a blockchain network, as a higher cost makes it more expensive and difficult to carry out such an attack.

4. Attack Cost (24H)

Attack Cost (24H): Attack Cost (24H) represents the estimated cost required to perform a 51% attack on a blockchain network for a duration of 24 hours.

Similar to Attack Cost (1H), this metric helps gauge the security and resilience of a network by considering the cost of sustaining a majority control over the network's hash rate for a longer period.

5. Next Halving Date

The Next Halving Date is the anticipated date when the block reward for miners is reduced by half in a blockchain that undergoes periodic halving events.

Halving events are programmed into certain cryptocurrencies, such as Bitcoin, to control the issuance rate and create scarcity over time.

The Next Halving Date is significant for miners and investors as it can impact the mining economics and potentially affect the supply and demand dynamics of the cryptocurrency.

2.3 ROHAS Token Valuation Method

ROHAS is an acronym for:

Revenue model

Organization

History

Algorithm

Social engagement

R = Revenue model

How does the project generate revenue for the ecosystem? Or what is the economic impact of the project?

You can get this information from the official website of the project, and the Whitepaper & other strategic documents.

O = Organization

Ideally, the organization / team (founders, dev, business) must be highly-skilled and respected with strong prior experience, strong credibility, and positive social media status.

You can get this information from the official website of the project, and the LinkedIn profiles of the team members.

H = History

Carefully analyze the trade pairs, listing on multiple credible exchanges, and relevant metrics:

1. Supply Metrics
2. Capitalization Metrics
3. Volume Metrics
4. Price Metrics
5. Holders' Statistics
6. ROI Metrics
7. DeFi Metrics
8. Consensus Metrics
9. Staking Metrics
10. Mining Metrics

A = Algorithm

The technology platform, consensus mechanism, and other tech issues are critical. Is the project developing a new blockchain? Is it using a tried and tested one? Is it a hard fork? How scalable is the platform?

S = Social

Ideally, the project must have a large, vibrant, active, engaged, positive community with a fair share of fanatics.

3. Token Economics

Token economics (tokenomics) studies the design and implementation of blockchain-based tokens.

Understanding token economics is crucial for anyone considering investing in or using a particular token.

Token economics involves analyzing:

1. the various factors that influence the supply, demand, and value of a token, and
2. the role that the token plays within the overall ecosystem.

Token economics is an important aspect of any blockchain-based project, as it can have a significant impact on the success and sustainability of the project.

Token economics plays a crucial role in the design and operation of blockchain-based systems, as it determines how value is generated, distributed, and maintained within the network.

Key factors that can influence token economics include:

1. Token issuance

Token issuance covers the total supply of tokens and the rate at which new tokens are issued. This heavily impacts the value and demand for a token.

2. Token distribution

Token distribution covers the way in which tokens are distributed e.g. mining, token sale, premine, etc. It heavily impacts the value and demand for a token.

3. Token utility

Token utility covers the usefulness and utility of a token. It heavily impacts the value and demand of a token.

4. Token demand

A token's demand can be influenced by many factors, including the perceived value of the token, the perceived value of the project or platform it is associated with, and the overall level of adoption of the project.

3.1 Token Ecosystem

The Token Ecosystem is the network of participants, stakeholders, and processes involved in creating, distributing, and using tokens within a blockchain-based system. Its key components are:

1. Token issuers

These are the entities that create and issue tokens, typically through an initial coin offering (ICO) or other mechanisms.

2. Token holders

These are the individuals or organizations that own and hold tokens e.g. Decentralized Autonomous Organizations (DAO).

3. Token exchanges

These are the platforms that allow users to buy and sell tokens. These can be centralized or decentralized.

4. Token wallets

These are digital wallet services that enable users to store and manage their tokens. These can be custodial or non-custodial.

5. Token smart contracts

These are the self-executing contracts that are encoded on the blockchain and enable the automation of certain processes within the token ecosystem.

6. Token standards

These are the technical specifications and protocols that define the characteristics and behavior of tokens within the ecosystem e.g. ERC-20, HYFI-TKN

7. Token regulators

These are the governmental or non-governmental organizations that oversee and regulate the use of tokens within the ecosystem.

3.2 Token Economics Parameters

Token Economics is not a one-time activity for a Blockchain project. It's a constant process.

Here are the 40 parameters in Token Economics.

1. Token allocation: How tokens are divided among different stakeholders, like founders, investors, users, and ecosystem development.

2. Distribution mechanisms: Methods used to distribute tokens, such as Airdrops, ICO, Reverse ICO, IEO, IDO, DAICO, ETO, STO, SAFT, etc.

3. Incentive structures: Rewards for users and stakeholders to promote specific behaviors, like network security, user engagement, or liquidity provision.

4. Token supply: Total number of tokens that exist or will exist, including fixed or variable supply models.

5. Token type: Classifying tokens based on their use cases.

6. Token utility: Functions and benefits provided by the token, like access to services, voting rights, or discounts.

7. Token price: The initial or ongoing value of the token, determined by factors like demand, supply, utility, and market conditions.

8. Token vesting: A process where tokens are released over time to stakeholders, encouraging long-term commitment and reducing the risk of token dumps.

9. Burn mechanisms: Reducing token supply by permanently removing tokens from circulation, often to maintain scarcity or stabilize price.

10. Token buybacks: Purchasing tokens from the open market and sometimes burning them, to create demand and support token value.

11. Staking rewards: Earning tokens as a reward for staking, or locking up tokens, to support network security or governance.

12. Governance rights: The ability of token holders to participate in decision-making processes for a project or protocol.

13. Inflation rate: The rate at which new tokens are created and added to the total supply, impacting token value and distribution.

14. Deflationary mechanisms: Strategies to reduce token supply over time, creating scarcity and potentially increasing token value.

15. Network fees: Costs associated with using a blockchain network, such as transaction or smart contract execution fees, paid in the native token.

16. Liquidity provisions: Ensuring tokens can be easily bought or sold by incentivizing users to provide liquidity to decentralized exchanges or other trading platforms.

17. Token sale structure: The format of the initial token sale, such as public sale, private sale, or auctions, with varying levels of access and pricing.

18. Use of proceeds: How funds raised from token sales are allocated, such as development, marketing, or partnerships.

19. Lock-up periods: Timeframes during which certain tokens cannot be sold or transferred, ensuring long-term commitment from stakeholders.

20. Revenue sharing: Distributing a portion of a project's revenue to token holders, often as an incentive for participation or investment.

21. Dividend distribution: Sharing profits with token holders, similar to traditional stock dividends.

22. Token migration: The process of transitioning from one token standard or blockchain platform to another, often to improve functionality or scalability.

23. Token upgradeability: Allowing for improvements or modifications to a token's features or functionality over time.

24. Collateral requirements: Amount of tokens or other assets needed to be locked up as collateral for certain activities, like lending, borrowing, or creating synthetic assets.

25. Cross-chain interoperability: Enabling tokens to be used across multiple blockchain platforms, improving liquidity and flexibility.

26. Oracle integration: Connecting tokens and smart contracts with external data sources, enabling real-world information to influence on-chain processes.

27. Privacy features: Implementing mechanisms to protect user privacy while using tokens, such as zero-knowledge proofs or confidential transactions.

28. Regulatory compliance: Ensuring that tokens and their distribution follow applicable laws and regulations to minimize legal risks.

29. KYC/AML requirements: Implementing Know Your Customer (KYC) and Anti-Money Laundering (AML) procedures to verify user identities and prevent illicit activities.

30. Ecosystem funding: Allocating a portion of tokens or resources to support the development of projects and initiatives within the ecosystem, fostering growth and innovation.

31. Tokenomics modeling: Creating mathematical models to simulate and analyze the behavior of token economies under various conditions, informing design decisions and optimizing token utility.

32. Community involvement: Encouraging token holders and users to participate actively in the project's development and growth, fostering a strong and engaged community.

33. Token redemption: Allowing users to redeem tokens for goods, services, or other benefits within the ecosystem, driving demand and utility.

34. Incentivized participation: Offering rewards or other benefits to users who contribute to the project or ecosystem, such as bug bounties, content creation, or user referrals.

35. Stability mechanisms: Implementing strategies to maintain token value stability, such as algorithmic stablecoins, collateralized stablecoins, or seigniorage shares.

36. Risk management: Identifying, assessing, and mitigating potential risks associated with token design, distribution, and usage to ensure long-term project sustainability.

37. Scalability considerations: Ensuring the token and its underlying platform can handle growing transaction volumes and user demand without compromising performance or security.

38. Sustainability initiatives: Incorporating environmentally friendly practices or technologies, such as energy-efficient consensus mechanisms or carbon offset initiatives, to reduce the environmental impact of token usage and blockchain networks.

39. Token distribution events: Organizing events like token airdrops, bounty programs, or staking rewards to distribute tokens to a wider audience and drive user adoption.

40. Token holder rights: Defining and protecting the rights of token holders, such as voting, revenue sharing, or redemption rights, to create a fair and transparent ecosystem.

3.3 Token Economic Models

The primary economic models are:

1. **Deflationary Model** where there is a hard cap on the number of tokens e.g. Bitcoin (BTC).
2. **Inflationary Model** where there is no hard cap on the number of tokens e.g. Ether (ETH).
3. **Multi-Token Model** where two or more tokens are used on a single chain e.g. Theta Network (THETA) and Theta Fuel (TFUEL).
4. **Asset-backed Model** where the token is backed by an asset like fiat currency e.g. Tether (USDT).

1. Deflationary Tokens

A deflationary token has one or both of these characteristics:

1. There is a hard cap on the number of tokens e.g. Bitcoin which has a maximum supply of 21 million.
2. The market supply reduces with time e.g. BNB started out with 200 million tokens and where tokens are burned each quarter till they reduce to 100 million.

The market supply is usually reduced in 2 ways:

1. **Buyback & Burn** - the project buys tokens and "burns" them by sending them to an address that has no known private key.
2. **Transaction Burning** - a smart contract automatically burns a portion of the transaction fees. The more transactions, the more the burns.

Since the supply of a deflationary token remains the same or decreases over time, its price is expected to increase if the demand remains constant.

2. Inflationary Tokens

An Inflationary Token is one that has no hard cap on the number of tokens e.g. Ether (ETH).

New tokens can be introduced primarily through mining and staking. As the supply increases, the value could drop.

Dogecoin (DOGE) started off as a deflationary token with a maximum supply of 100 billion DOGE. But this was removed in 2014 and DOGE became inflationary.

The fiat currencies of the world (USD, INR, etc.) are also inflationary as there is no limit on the amount that can be created.

3. Multi-Token Model

In Multi-Token models, two or more distinct tokens are issued. This could be done to avoid legal compliance problems or to offer better incentives, features, and functionalities.

Some examples of Multi-Token models are:

1. Axie Infinity (SLP, AXS & Axies)
2. Theta Network (THETA & TFUEL)
3. VeChainThor (VET & VTHO)

4. Asset-backed Tokens

Asset-backed tokens are backed by real-world assets like Art, Copyright Licenses, Fiat Currencies, Private Equity, Real Estate, Whisky Casks, etc.

These tokens are also referred to as stablecoins, tokenized assets, or wrapped assets. The underlying assets are maintained either by the token issuer or legally recognized custodians.

Issues that impact Token Economic Models

1. Mining

Mining is the process of using specialized hardware to solve complex mathematical problems in order to validate blockchain transactions and earn rewards e.g. Bitcoin.

2. Staking

Staking is the process of holding a certain amount of a Blockchain Token in a wallet and using it to help secure and validate transactions on a blockchain.

Stakers earn rewards in the form of additional tokens.

3. Yields

Yields are the rewards or returns that users earn by participating in certain blockchain-based activities e.g. staking on a Proof-of-stake blockchain or lending tokens on a decentralized finance (DeFi) platform.

4. Pre-mining

Pre-mining is the generating and accumulating of tokens before a blockchain-based project is publicly launched.

Pre-mining is done in the development phase of a project to fund the development and marketing of the project. Pre-mining is a great way to fund a project and incentivize early adopters.

5. Token burns

Token burns involve the permanent destruction or removal of tokens from circulation.

The top reasons for burning tokens are:

1. Reducing the overall supply to increase the value of the remaining tokens.
2. Signaling governance approval for proposals.

6. Token allocations

Token allocations involve the distribution of tokens to the founders, investors, and other supporters of a blockchain-based project. They are done through ICOs, airdrops, private sales, etc.

7. Vesting periods

The vesting period is the time period before which token holders are not entitled to access and use their tokens.

This is to incentivize long-term participation in a Blockchain project. In cliff vesting, token holders must wait a certain amount of time before they are entitled to any tokens.

In graded vesting, token holders are entitled to a certain percentage of their tokens at regular intervals over time.

3.4 Token Distribution Methods

The 9 primary token distribution methods are:

1. Airdrops

An airdrop is a marketing activity by a new crypto project. A small amount of crypto is sent out for "free" to increase awareness.

It's not entirely "free" as you may need to do some promotional work like retweeting a post, sharing a link with your network, etc. If you want to bypass this work, you can sign up for automated services.

2. Initial Coin Offering (ICO)

In an ICO, investors fund a blockchain project in return for tokens which are expected to increase in value over time.

The funding is based primarily on information provided by the project's whitepaper, website, and social media accounts.

3. Reverse ICO

In a reverse ICO, an existing, established real-world business issues a token to decentralize its ecosystem, and raise funds.

4. Initial Exchange Offering (IEO)

An IEO is very similar to an ICO. The only difference is that the funding is based on a crypto exchange.

5. Initial DEX Offering (IDO)

In an IDO, the tokens are launched through a decentralized exchange (DEX)

6. DAICO

A DAICO combines the characteristics of a Decentralized Autonomous Organization (DAO) with that of an Initial Coin Offering (ICO).

A DAICO can make an ICO more secure by involving investors in the initial project development process. It enables token holders to vote for the refund of the contributed funds if they are not happy with the progress being made by developers.

7. Equity Token Offerings (ETOs)

In an ETO, the investors get pro-rata ownership in the company and dividend and voting rights.

8. Security Token Offerings (STOs)

An STO is a fundraising model in which the tokens being sold are classified as securities.

This means that the tokens are subject to securities laws and regulations, and must be registered with the appropriate regulatory authorities.

STOs are often used to raise funds for projects that are backed by real-world assets and the tokens represent ownership or investment interest in the underlying assets.

STOs are becoming increasingly popular as a way for companies to raise capital in a compliant and transparent manner, and are seen as a potential alternative to traditional forms of securities issuance, such as initial public offerings (IPOs).

9. Simple Agreement for Future Tokens (SAFT)

SAFT is a legal framework used in ICOs to ensure compliance with securities laws. A SAFT is a contract between a company and an investor, in which the investor agrees to purchase tokens at a future date, once the tokens have been fully developed and are ready to be distributed.

The investor is typically required to pay a certain amount of money upfront, in exchange for the right to receive the tokens at a later date. The SAFT framework is designed to provide a clear and straightforward way for companies to raise funds through ICOs while complying with securities laws.

3.5 What does a Token Economist do?

Here's what a Token Economist does:

1. Designs Whitepapers.
2. Values Tokens using subjective, mathematical, and hybrid models.
3. Develops and implements economic models & frameworks.
4. Conducts research on token-based systems and the broader cryptocurrency market.
5. Collaborates with cross-functional teams to design and launch new tokens and blockchain-based projects.
6. Advises on the economic implications of different design choices and technical decisions.
7. Supervises legal & regulatory compliance.
8. Monitors and analyzes market trends and dynamics, and provides recommendations on how to optimize the performance and sustainability of token-based systems.

3.6 Token Whitepapers

A Blockchain Whitepaper describes the features and specifications of a blockchain-based project, including:

1. the problem that the project aims to solve,
2. the solution that the project proposes, and
3. the details of the project's token sale and governance model.

Whitepapers are designed by Token Economists and are aimed at potential investors and users.

A **Lightpaper** is a simplified & shorter version of the Whitepaper. A **Yellowpaper** contains technical details and is aimed at developers, startups & technologists. A **Beigepaper** is a simplified & shorter version of the Yellowpaper.

Inspired by the Virtual Financial Assets Act of Malta, here is a list of 45+ things that a Blockchain Token Whitepaper should have.

1. Summary of the Whitepaper
2. A statement from the relevant persons explaining any assumptions made in the whitepaper.

- 3.** Date of issue of the whitepaper.
- 4.** Names, functions, and declarations by the persons responsible for the whitepaper that to the best of their knowledge the information contained in the whitepaper is in accordance with the facts and that the whitepaper makes no omissions likely to affect its import.
- 5.** Description of the reason behind the Blockchain Token Offering.
- 6.** Detailed technical description of the protocol, platform and / or application, as the case may be, and the associated benefits.
- 7.** Detailed description of the sustainability and scalability of the proposed project.
- 8.** Associated challenges and risks as well as mitigating measures thereof.
- 9.** Detailed description of the characteristics and functionality of the Blockchain Tokens being offered.
- 10.** Detailed description of the issuer, agents, development team, advisors, and any other service providers that may be deployed for the realization of the project.
- 11.** Detailed description of the issuer's wallet(s) used.

- 12.** Description of the security safeguards against cyber threats to the underlying protocol, to any off-chain activities, and to any wallets used by the issuer.
- 13.** Detailed description of the life cycle of the Initial Blockchain Token Offering and the proposed project.
- 14.** Detailed description of the past and future milestones and project financing.
- 15.** Detailed description of the targeted investor base.
- 16.** Exchange rate of the Blockchain Tokens.
- 17.** Description of the underlying protocol's interoperability with other protocols.
- 18.** Description of the manner in which the funds raised through the Initial Blockchain Token Offering will be allocated.
- 19.** The amount and purpose of the issue.
- 20.** The total number of Blockchain Tokens to be issued and their features.
- 21.** The distribution of Blockchain Tokens.
- 22.** The consensus algorithm, where applicable.

- 23.** Incentive mechanism to secure any transactions, and/or any other applicable fees.
- 24.** In the case of a new protocol, the estimated speed of transactions.
- 25.** Any applicable taxes.
- 26.** Any set soft cap and hard cap for the Initial Blockchain Token Offering.
- 27.** The period during which the Initial Blockchain Token Offer is open.
- 28.** Any person underwriting or guaranteeing the Initial Blockchain Token Offering.
- 29.** Any restrictions on the free transferability of the Blockchain Tokens being offered and the exchange(s) on which they may be traded, to the extent known by the issuer.
- 30.** Methods of payment.
- 31.** Specific notice that investors participating in the Initial Blockchain Token Offering will be able to get their contribution back if the soft cap is not reached at the end of the offering and a detailed description of the refund mechanism, including the expected timeline of when such refund will be completed.

32. Detailed description of the risks associated with the Blockchain Tokens and the investment therein.

33. The procedure for the exercise of any right of pre-emption.

34. Detailed description of the smart contract(s), if any, deployed including inter alia the adopted standards, its / their underlying protocol(s), functionality(ies), and associated operational costs.

35. If any smart contract/s is / are deployed by the issuer, details of the auditor who performed an audit on it / them.

36. Description of any restrictions embedded in the smart contract(s) deployed, if any, including inter alia any investment and / or geographical restrictions.

37. The oracles used to obtain data and verify occurrences from smart contracts used and detailed descriptions of their characteristics and functionality thereof.

38. Bonuses applicable to early investors including inter alia discounted purchase price for the Blockchain Tokens.

39. The period during which voluntary withdrawals are permitted by the smart contract, if any.

40. Description of the issuer's adopted white-listing, anti-money laundering, and countering the financing of terrorism procedures.

41. Intellectual property rights associated with the Initial Blockchain Token Offering and protection thereof.

42. The methods of and time-limits for delivery of the Blockchain Tokens.

43. Details of the issuer:

(1) Name

(2) Registered address and registration number \ (3)

Date of registration

(4) The issuer's object(s)

(5) Where applicable, the group of undertakings to which the issuer belongs

(6) Indication of the members who directly or indirectly exercise or could exercise a determining role in the issuer's administration

(7) The issuer's principal activities.

44. Description of the issuer's principal activities including the disclosure of any legal proceedings having an important effect on the issuer's financial position.

45. Names, addresses, and functions of administrators.

46. The amount or estimated amount of preliminary expenses and the persons by whom any of those expenses have been paid or are payable, and the amount or estimated amount of the expenses of the issue and the persons by whom any of those expenses have been paid or are payable, in whatever form.

47. Where the issuer has been established for a period exceeding three years, details of its financial track record.

4. Understanding Tokenization

4.1 The Tokenization Equation

Tokenization is the process of converting the economic rights of an asset into digital tokens on a blockchain. These digital tokens represent a share or fraction of the underlying asset.

Here's the Tokenization Equation:

Tokenization of Asset on the Blockchain
= Authentication
+ Provenance
+ Fractionalization
+ Trading

Each token represents a fraction of ownership in the underlying asset, enabling investors to buy, sell, or trade these tokens on digital asset marketplaces.

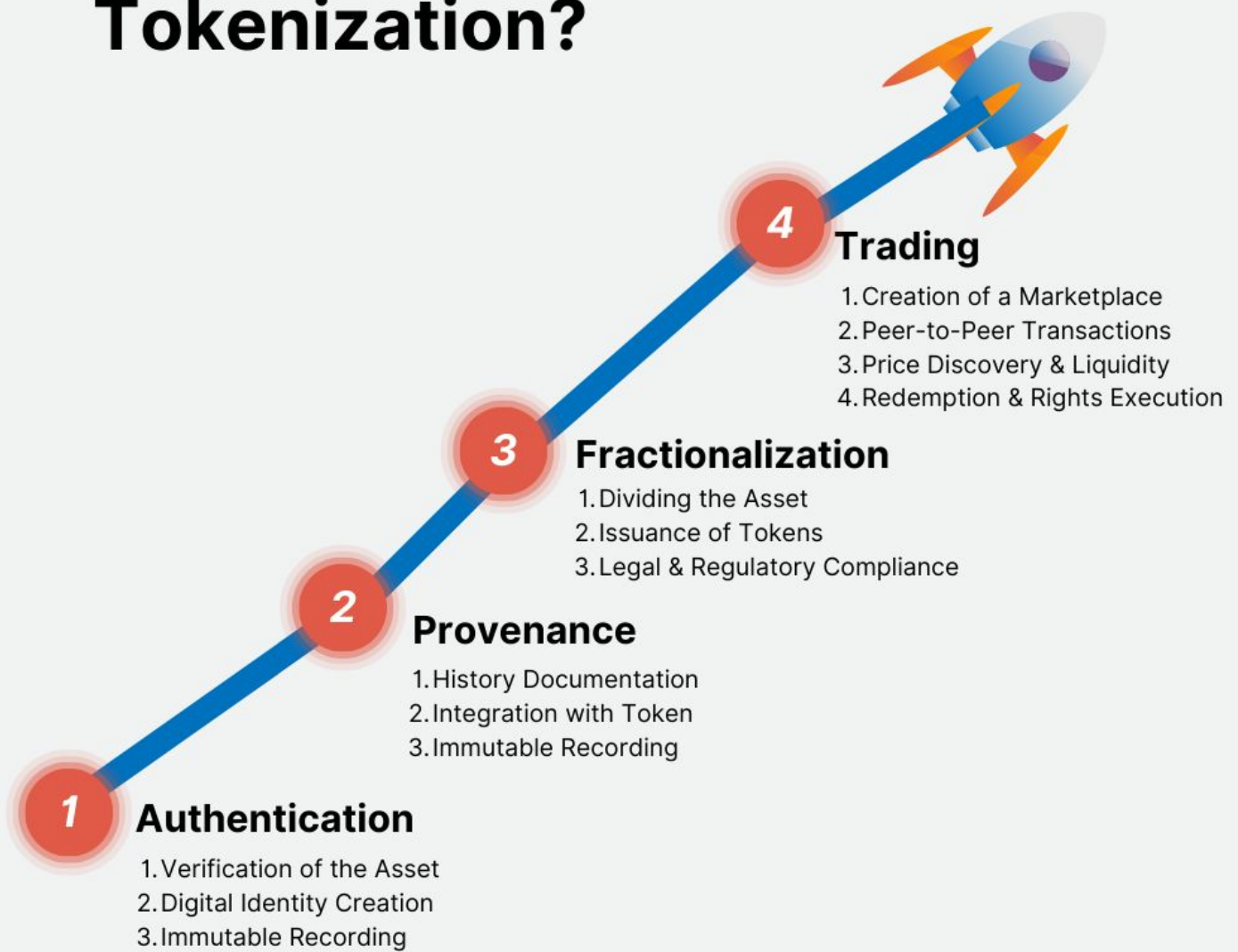
Tokenization bridges the gap between traditional finance and the digital world, leveraging the benefits of blockchain technology.

Effectively, Tokenization brings the asset to the Crypto world where it can be fractionalized and traded 24x7 by a global audience.

The biggest advantages of Tokenization are:

1. Democratization of investments by lowering entry barriers.
2. Enabling small & individual investors to participate in markets that were previously accessible only to wealthy individuals or institutional investors.
3. Increased Liquidity and Market Efficiency.
4. Bringing liquidity to markets that are traditionally illiquid.
5. Bringing greater market efficiency and price discovery.

What is Tokenization?



Tokenization Playbook by Rohas Nagpal

4.2 Benefits of Tokenization

4.2.1 Art

Art is a **US\$ 580 Billion** sector and comprises Paintings, Sculptures, and Folk & Tribal Art.

Benefits of Tokenizing Art on the Blockchain are:

- 1. Ownership Made Easy:** Blockchain lets you split art into digital shares, so buying and owning art becomes simpler and more accessible.
- 2. Proof of Authenticity:** Say goodbye to fakes! The blockchain keeps a permanent record, proving the art's real deal.
- 3. Global Market Access:** Artists and buyers from all over can connect, making the art world truly global.
- 4. Fast and Secure Transactions:** Buying and selling art happens in a snap, and it's super secure, thanks to blockchain tech.
- 5. Lower Costs, More Profit:** With fewer middlemen, artists earn more, and buyers pay less. It's a win-win!

6. Transparency in Art History: Every time the art changes hands, it's recorded. So, its history is transparent.

7. Easy to Transfer Ownership: Transferring ownership of art just takes a few clicks.

8. Democratizing Art Investment: Even if you're not a millionaire, you can own a piece of fancy art. It's all about buying fractions now.

9. Liquidity Boost: Selling art fractions is often easier and quicker than selling the whole piece.

10. Royalties for Artists: Artists can get a cut every time their art is resold.

4.2.2 Carbon Credits

Carbon Credits are a **US\$ 25 Billion** opportunity and the benefits of tokenizing them on the Blockchain are:

1. Transparent Tracking: Blockchain ensures every carbon credit's history is clear and tamper-proof.

2. Global Access: Anyone around the world can buy or sell carbon credits easily, opening up a worldwide market.

3. Quick and Secure Trades: Blockchain technology makes buying and selling carbon credits fast and super secure.

4. Reduced Costs: Cutting out middlemen means lower fees, making carbon trading more cost-effective for everyone.

5. Real-Time Auditing: Every transaction is recorded instantly and immutably, allowing for ongoing and accurate auditing.

6. Fractional Ownership: Blockchain lets you split carbon credits into smaller parts. Now, even small players can participate in the carbon market.

7. Increased Liquidity: Tokenizing carbon credits makes them easier to trade, boosting market liquidity.

8. Encourages Eco-Responsibility: Easier access to the carbon market can motivate more companies and individuals to offset their carbon footprint.

9. Direct Transactions: Direct peer-to-peer trading eliminates the need for intermediaries, streamlining the process.

4.2.3 Copyright Licenses

Copyright Licenses are a **US\$ 173 Billion** opportunity and the benefits of tokenizing them on the Blockchain are:

1. Wider Market Access: Artists and creators can reach a global audience, breaking geographical barriers.

2. Efficient Royalty Distribution: Automated and transparent royalty payments through smart contracts, ensuring creators get paid fairly and timely.

3. Fractional Ownership: Allows multiple investors to own shares of a single copyright, making it accessible to a broader range of investors.

4. Increased Liquidity: Tokenization can make buying and selling copyright licenses quicker and easier, boosting market liquidity.

5. Enhanced Security: Blockchain's secure nature reduces the risk of fraud and unauthorized copying.

6. Transparent History Tracking: Every transaction and transfer is recorded, creating a clear history of ownership and usage.

7. Direct Creator-Investor Connection: Removes intermediaries, allowing creators to directly engage with their audience and investors.

8. Flexible Investment Options: Investors can diversify their portfolio with different types of creative works.

9. Real-time Revenue Tracking: Enables creators and investors to monitor earnings in real-time.

10. Legal Efficiency: Smart contracts can enforce the terms of copyright agreements, reducing legal disputes.

4.2.4 Diamonds

The benefits of Tokenizing Diamonds on the Blockchain are:

- 1. Democratized Investment:** Opens up diamond investment to more people by allowing fractional ownership of high-value diamonds.
- 2. Increased Liquidity:** Tokenization can make trading diamonds faster and more fluid compared to traditional methods.
- 3. Enhanced Transparency:** Every step from mining to market is recorded, ensuring the authenticity and ethical sourcing of diamonds.
- 4. Secure Transactions:** The secure nature of blockchain technology reduces the risk of fraud and theft in diamond transactions.
- 5. Global Access:** People from all over the world can invest in and trade diamonds, expanding the market reach.
- 6. Efficient Tracking:** Easily track the history and value appreciation of individual diamonds over time.

7. Reduced Transaction Costs: Cutting out intermediaries lowers the costs associated with buying and selling diamonds.

8. Automated Compliance: Smart contracts can ensure compliance with international regulations and standards for diamond trade.

9. Customizable Investment Sizes: Investors can buy tokens representing a portion of a diamond's value, fitting their budget and investment strategy.

4.2.5 Private Equity

Private Equity is a **US\$ 11.7 Trillion** opportunity and the benefits of tokenizing it on the Blockchain are:

- 1. Broader Investor Access:** Tokenization opens up private equity investments to a wider range of investors, not just the traditionally wealthy.
- 2. Improved Liquidity:** Trading tokens can be faster and easier than traditional private equity shares, enhancing market liquidity.
- 3. Transparency in Transactions:** Blockchain provides a clear record of transactions, increasing transparency and trust.
- 4. Reduced Minimum Investment:** Fractional ownership allows for lower minimum investments, making it more accessible.
- 5. Automated Compliance:** Smart contracts can streamline regulatory compliance, reducing administrative burdens.
- 6. Efficient Capital Raising:** Easier and potentially faster to raise capital by reaching a global pool of investors.

7. Reduced Costs: Cutting out intermediaries reduces transaction fees and management costs.

8. Real-Time Asset Valuation: The ability to track private equity performance and valuation in real-time.

9. Enhanced Security: Blockchain's secure nature minimizes the risks of fraud and unauthorized transactions.

10. Global Trading Opportunities: Investors from around the world can participate, diversifying the investor base.

4.2.6 Rare Collectibles

Rare Collectibles are a **US\$ 370 Billion** opportunity and the benefits of tokenizing them on the Blockchain are:

- 1. Wider Accessibility:** Tokenization allows more people to own a piece of rare collectibles, democratizing access to what was once a niche market.
- 2. Increased Liquidity:** Tokens can be bought and sold more easily than physical collectibles, making the market more fluid.
- 3. Enhanced Transparency:** Blockchain technology provides a clear history of ownership and authenticity, crucial for collectibles.
- 4. Fractional Ownership:** Investors can buy shares in high-value collectibles, making it financially accessible.
- 5. Global Reach:** Collectors and investors from all over the world can participate, expanding the market.
- 6. Secure Transactions:** The inherent security of blockchain reduces the risks of fraud and counterfeit.

7. Streamlined Transfer of Ownership: Transferring ownership of tokens is quicker and simpler compared to physical items.

8. Reduced Transaction Costs: Eliminating intermediaries cuts down on fees associated with buying and selling collectibles.

9. Portfolio Diversification: Offers a unique asset class for investors looking to diversify their portfolios.

4.2.7 Real Estate

Real Estate is a **US\$ 326 Trillion** opportunity and the benefits of tokenizing it on the Blockchain are:

- 1. Fractional Ownership Made Easy:** Split big property investments into smaller, affordable shares. This democratizes real estate investing.
- 2. Global Investors:** Anyone around the world can invest in properties, making the market truly international.
- 3. Quick Transactions, Less Hassle:** Buying and selling property shares is fast and smooth, without the usual paperwork nightmare.
- 4. Cut Down on Middlemen:** Fewer intermediaries mean lower costs and more profit for both buyers and sellers.
- 5. Clear Property History:** Blockchain keeps an unchangeable record of each property's history, making it transparent and trustworthy.
- 6. Easy Transfer of Ownership:** Changing property ownership is just a few clicks away, bypassing traditional, time-consuming processes.

7. Increased Liquidity in Real Estate: Selling shares in a property can be quicker than selling the whole property, giving a liquidity boost.

8. Automatic Rent Distribution: Smart contracts can automatically split and send rental income to shareholders.

9. Secure and Transparent Deals: With blockchain, real estate transactions are more secure and transparent, reducing the risk of fraud.

10. Access to Premium Properties: Tokenization opens the door to high-end properties that were once out of reach for most investors.

4.2.8 Structured Financial Products

Structured Financial Products are a **US\$ 7 Trillion** opportunity and the benefits of tokenizing them on the Blockchain are:

- 1. Enhanced Liquidity:** Tokenization can make these complex financial products more liquid and easier to trade.
- 2. Broader Investor Access:** Lower entry barriers allow a wider range of investors to participate in structured product markets.
- 3. Increased Transparency:** Blockchain's transparent ledger provides clear tracking of product structures and transactions.
- 4. Automated Compliance:** Smart contracts enable automatic adherence to regulatory requirements, reducing the risk of non-compliance.
- 5. Improved Efficiency:** Reduces the need for intermediaries, streamlining the transaction process and lowering costs.
- 6. Customization and Flexibility:** Offers the potential for more customized product structures to meet diverse investor needs.

7. Real-Time Valuation: Investors can access up-to-date valuations of their investments, enhancing decision-making.

8. Global Participation: Breaks down geographical barriers, allowing global trading and investment in structured products.

9. Risk Management: Facilitates better risk distribution among a larger pool of investors.

10. Innovation in Financial Products: Encourages the development of new and innovative financial products through blockchain technology.

4.2.9 Tax Deeds

The benefits of Tokenizing Tax Deeds on the Blockchain are:

- 1. Expanded Investor Access:** Tokenization allows a broader range of investors to participate in the tax deed market, traditionally limited to specialized investors.
- 2. Increased Liquidity:** Tokens representing tax deed investments can be traded more easily than traditional tax deed transactions, enhancing liquidity in the market.
- 3. Enhanced Transparency:** Blockchain provides a clear, immutable record of tax deed transactions, ensuring accuracy and trust in ownership records.
- 4. Reduced Entry Barrier:** Fractional ownership through tokenization lowers the financial threshold for investment, making it more accessible.
- 5. Faster Transactions:** The use of blockchain technology can streamline the process, reducing the time and complexity involved in buying and selling tax deeds.
- 6. Global Investment Opportunities:** Investors from around the world can participate, diversifying the investor base and potentially stabilizing the market.

7. Automated Compliance and Reporting: Smart contracts can help in automating regulatory compliance and reporting requirements, reducing administrative burdens.

8. Lower Transaction Costs: By reducing the need for intermediaries, blockchain can lower the costs associated with tax deed transactions.

9. Real-Time Asset Management: Enables more efficient monitoring and management of investments in tax deeds.

10. Secure Investment Platform: Blockchain's secure nature minimizes risks of fraud and unauthorized alterations in the investment process.

4.2.10 Whisky Casks

Whisky Casks are a **US\$ 300 Billion** opportunity and the benefits of tokenizing them on the Blockchain are:

- 1. Democratized Ownership:** Allows a broader range of investors to own a share in high-value whisky casks, which were traditionally accessible only to the affluent.
- 2. Increased Liquidity:** Tokens representing whisky cask ownership can be more readily traded than the casks themselves, offering greater market liquidity.
- 3. Enhanced Transparency:** Blockchain provides a clear, tamper-proof record of the whisky cask's history, from distillation to maturation.
- 4. Fractional Investment:** Investors can buy a fraction of a cask, making it financially accessible and diversifying investment options.
- 5. Global Market Access:** Breaks down geographical barriers, enabling whisky enthusiasts and investors worldwide to participate.
- 6. Secure Transactions:** The secure nature of blockchain technology reduces the risk of fraud in the buying and selling process.

7. Automated Processes: Smart contracts can streamline processes such as profit-sharing from cask sales or bottling.

8. Reduced Transaction Costs: By minimizing intermediary involvement, blockchain can lower costs associated with the transaction.

9. Real-time Valuation Tracking: Offers the ability to monitor the value of whisky casks as they age and potentially increase in value.

10. Asset-Backed Investment: Each token is backed by a tangible, physical asset, adding a layer of security to the investment.

4.3 Interesting Tokenization Projects

1. Maple Finance

Maple enables experts to handle quick-paced loan operations, channeling funds to companies for expansion and daily tasks.

Maple matches both big institutions and qualified individual investors with lending options that align with their needs for liquidity, risk, and profit.

Maple Finance leverages Ethereum.

2. Matrixdock

Matrixdock's primary product is STBT, a tokenized version of short-term US Treasury securities with 6-month maturities and reverse repurchase agreements.

STBT is an ERC-1400 token for institutional and accredited investors. STBT rebases interest every business day.

Matrixdock leverages Ethereum.

3. Meld

Meld Tokens are redeemable for gold, silver, platinum or palladium.

Each Meld Token is backed by 1 gram of gold, silver, platinum, or palladium. The precious metals are stored in secure vaults.

Meld leverages Algorand.

4. Ondo Finance

Ondo Finance operates USDY, a tokenized note secured by short-term US Treasuries and bank demand deposits.

It currently operates 4 funds:

1. US Money Market Fund
2. Short-Term US Government Bond Fund
3. Short-Term Investment Grade Bond Fund
4. High Yield Corporate Bond Fund

Ondo Finance leverages Ethereum and Polygon.

5. RealToken

RealToken enables ownership of US real estate properties through digital tokens on Ethereum and Gnosis Chain.

For each real-estate offering, RealToken creates a Delaware Series LLC or Inc. which owns a single asset (a property) with its own token and unique address. This ensures that the properties are legally independent and are not cross-collateralized.

RealToken leverages the Gnosis Chain.

6. Tangible

Tangible operates RealUSD, which is backed by tokenized real estate.

The rent collected from the rental properties is distributed daily as a native rebase. The yield increases with the value of real estate held.

Real USD is pegged to the US dollar and 50% of the backing is held in DAI.

If the collateralization ratio drops beneath 100%, then 50% of the rental yield is automatically redirected to the treasury. This recollateralizes the asset and ensures that Real USD is fully backed.

Tangible leverages Polygon, Ethereum, and Optimism.

7. Toucan Protocol

Toucan Protocol enables the tokenization of Carbon Credits.

Carbon Bridges enable the tokenization of carbon credits held in carbon registries. These credits are locked so that they cannot be double-counted.

Carbon Pools add liquidity by holding tokenized carbon credits with similar attributes. The pools create tradable reference tokens.

Toucan enables quick & transparent retirement of carbon credits.

Toucan Protocol leverages Polygon, and Celo.

8. Whisky Fractions Marketplace

Whisky Fractions is a digital marketplace for buying & selling fractions of Whisky in Casks.

Whisky, unlike wine, matures exclusively in a cask. Cask refers to all types of oak vessels that are used in the storage and maturation of whisky.

Whisky in Casks is called "liquid gold" because of its economic potential, and its tangible, appreciating nature.

Whisky Fractions leverages the Hybrid Finance Blockchain (HYFI).

5. HYFI Tokenization Checklists

The information provided in these checklists is for general informational purposes only.

It is not intended as legal, financial, or investment advice and should not be considered as such.

The specifics of each asset class and tokenization project may vary, and the checklists are not exhaustive.

Users of these checklists should conduct their own due diligence and consult with professional advisors in the legal, financial, and investment fields before making any decisions.

The author of the checklists assumes no responsibility for any errors or omissions, or for any actions taken based on the information contained herein.

5.1 Art

HYFI Checklist for Tokenization of Art on the Blockchain.

1. Preliminary Actions

- ❑ A. Selection of Art Piece: Choose an art piece suitable for tokenization.
- ❑ B. Art Appraisal: Obtain a professional valuation to establish its market value.
- ❑ C. Legal Compliance: Ensure adherence to laws related to art ownership, transfer, and copyright.
- ❑ D. Securities Law Adherence: Understand and comply with securities laws for token issuance.

Responsibility: Art Owner

2. Creation of Tokenization Whitepaper

Develop a comprehensive whitepaper detailing the project, including art details, token structure, rights of token holders, risks, and legal aspects.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Formation: Set up a special purpose vehicle or similar entity to hold the art asset.
- ❑ B. Token Holder Relationship: Define the legal relationship between this entity and token holders.

Responsibility: Art Owner

4. AMA (Ask Me Anything) Session with Core Team

Conduct an interactive session for potential investors to inquire about the project.

Responsibility: Team HYFI and Art Owner

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing shares in the art piece on HYFI and another blockchain (e.g., Ethereum, Binance, or Polygon).
- ❑ B. Token Quantity and Value: Decide the total number of tokens and their individual value.
- ❑ C. Smart Contract Creation: Automate ownership, transfer, and revenue sharing terms.

- ❑ D. Token Distribution Plan: Outline private and public sales and investor allocations.
- ❑ E. Token Availability: List tokens on HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Art Owner)

6. Marketing and Promotion

Develop and implement a marketing strategy across various platforms.

Responsibility: Team HYFI (Costs covered by Art Owner)

7. Token Sale Launch

Execute the token sale according to the distribution strategy.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Handle post-sale token management and provide regular updates to investors.

Responsibility: Team HYFI (Training provided to Art Owner's team)

9. Secondary Market Facilitation

Provide guidance for trading tokens on secondary markets.

Responsibility: Team HYFI (Training provided to Art Owner's team)

10. Ongoing Compliance and Management

A. Legal and Regulatory Compliance: Continuously ensure compliance with relevant laws.

B. Art Management: Manage the art piece and distribute earnings to token holders (if applicable).

Responsibility: Art Owner

5.2 Carbon Credits

1. Preliminary Actions

- ❑ A. Selection of Carbon Credit Projects: Identify eligible carbon reduction projects for tokenization.
- ❑ B. Verification and Validation: Ensure the carbon credits are verified and validated by recognized environmental standards.
- ❑ C. Compliance with Environmental Laws: Adhere to international and local environmental laws and regulations.
- ❑ D. Understanding Carbon Markets: Familiarize with the regulatory framework of carbon markets and emissions trading schemes.

Responsibility: Carbon Credit Owner

2. Creation of Tokenization Whitepaper

Develop a detailed whitepaper outlining the carbon credit tokenization project, including project details, token structure, rights of token holders, environmental impact, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Setup: Form a legal entity to hold the carbon credit assets.
- ❑ B. Legal Relationship Definition: Clearly define the relationship between the entity and the token holders.

Responsibility: Carbon Credit Owner

4. AMA (Ask Me Anything) Session with Core Team

Host a session for potential investors to engage with the project team and ask questions.

Responsibility: Team HYFI and Carbon Credit Owner

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing shares in the carbon credit project on suitable blockchains like HYFI, Ethereum, Binance, or Polygon.
- ❑ B. Token Quantity and Valuation: Decide on the total number of tokens and their individual value.

- ❑ C. Smart Contract Creation: Implement smart contracts for ownership, transfer, and revenue distribution.
- ❑ D. Token Distribution Strategy: Plan for private sales, public offerings, and investor categories.
- ❑ E. Listing on Marketplaces: Make tokens available on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Carbon Credit Owner)

6. Marketing and Promotion

Develop and execute a marketing strategy to attract investors through various channels.

Responsibility: Team HYFI (Costs covered by Carbon Credit Owner)

7. Token Sale Launch

Conduct the token sale, ensuring a transparent and compliant process.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular reports to token holders on the project's environmental impact and other updates.

Responsibility: Team HYFI (Training for Carbon Credit Owner's team)

9. Secondary Market Facilitation

Assist in trading tokens on secondary markets to enhance liquidity.

Responsibility: Team HYFI (Training for Carbon Credit Owner's team)

10. Ongoing Compliance and Management

- A. Continuous Legal and Regulatory Compliance: Ensure adherence to evolving environmental laws and carbon market regulations.
- B. Project Management: Oversee the carbon credit project and distribute returns to token holders, if applicable.

Responsibility: Carbon Credit Owner

5.3 Copyright Licenses

1. Preliminary Actions

- ❑ A. Selection of Copyright Material: Identify and select the copyright material eligible for tokenization (e.g., art, book, music, movies, software, etc).
- ❑ B. Legal Due Diligence: Ensure all copyrights are legally owned or licensed and free of disputes.
- ❑ C. Compliance with Copyright Laws: Adhere to international and local copyright laws and regulations.
- ❑ D. Understanding Copyright Markets: Familiarize with market dynamics for the specific type of copyright material.

Responsibility: Copyright Owner

2. Creation of Tokenization Whitepaper

Develop a comprehensive whitepaper detailing the tokenization project, including details about the copyrighted material, token structure, rights and obligations of token holders, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Formation: Set up a legal entity (like a trust or company) to manage the copyright assets.
- ❑ B. Legal Relationship with Token Holders: Define the relationship between this entity and the token holders, including rights to royalties and usage.

Responsibility: Copyright Owner

4. AMA (Ask Me Anything) Session with Core Team

Conduct an interactive session for potential investors to inquire about the project.

Responsibility: Team HYFI and Copyright Owner

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing fractional ownership or rights in the copyright material on suitable blockchains like HYFI, Ethereum, Binance, or Polygon.
- ❑ B. Token Quantity and Valuation: Determine the total number of tokens and their individual value.

- ❑ C. Smart Contract Implementation: Deploy smart contracts to manage ownership, royalty distribution, and usage rights.
- ❑ D. Distribution Strategy: Plan the distribution of tokens, including private sales, public offerings, and allocations for different investor categories.
- ❑ E. Listing on Marketplaces: List tokens on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Copyright Owner)

6. Marketing and Promotion

Develop and implement a marketing strategy using various channels to attract investors.

Responsibility: Team HYFI (Costs covered by Copyright Owner)

7. Token Sale Launch

Facilitate the token sale, adhering to the planned distribution strategy.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Handle post-sale token management and provide regular updates to token holders regarding earnings and copyright status.

Responsibility: Team HYFI (Training provided to Copyright Owner's team)

9. Secondary Market Facilitation

Assist in trading tokens on secondary markets to enhance liquidity.

Responsibility: Team HYFI (Training provided to Copyright Owner's team)

10. Ongoing Compliance and Management

- A. Continued Legal and Regulatory Compliance: Ensure ongoing adherence to copyright and intellectual property laws.
- B. Management of Copyright Assets: Oversee the management and enforcement of copyright rights, and distribute royalties or earnings to token holders.

Responsibility: Copyright Owner

5.4 Diamonds

1. Preliminary Actions

- ❑ A. Selection of Diamonds: Identify and choose diamonds suitable for tokenization, considering quality, rarity, and market value.
- ❑ B. Certification and Appraisal: Ensure each diamond is certified by a reputable gemological institute and appraised for its market value.
- ❑ C. Legal Compliance: Adhere to international and local laws regarding the trading and ownership of diamonds, including conflict diamond regulations.
- ❑ D. Market Analysis: Understand the current market dynamics and potential investor interest in diamond tokenization.

Responsibility: Diamond Owner

2. Creation of Tokenization Whitepaper

Develop a whitepaper outlining the project, including specifics of the diamonds, token structure, rights of token holders, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Formation: Create a legal entity to hold and manage the diamond assets.
- ❑ B. Relationship with Token Holders: Clearly define the legal relationship between this entity and token holders, including rights to returns from sales or rentals.

Responsibility: Diamond Owner

4. AMA (Ask Me Anything) Session with Core Team

Host an interactive session for potential investors to engage with the project team.

Responsibility: Team HYFI and Diamond Owner

5. Tokenization Process

- ❑ A. Token Creation: Develop tokens representing shares in the diamond assets on appropriate blockchains like HYFI, Ethereum, Binance, or Polygon.
- ❑ B. Token Valuation: Decide on the total number of tokens and their individual value based on the diamonds' appraisal.

- ❑ C. Smart Contract Implementation: Implement smart contracts for ownership transfer, and possibly for sharing returns from sales or rentals.
- ❑ D. Distribution Plan: Strategize the distribution of tokens, including private sales, public offerings, and allocations for different investor categories.
- ❑ E. Marketplace Listing: List tokens on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Diamond Owner)

6. Marketing and Promotion

Develop and execute a marketing strategy to attract investors, utilizing various channels.

Responsibility: Team HYFI (Costs covered by Diamond Owner)

7. Token Sale Launch

Execute the token sale according to the distribution strategy, ensuring a transparent and compliant sales process.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular reports to token holders on the status of the diamond assets and any returns.

Responsibility: Team HYFI (Training provided to Diamond Owner's team)

9. Secondary Market Facilitation

Assist in facilitating the trading of tokens on secondary markets to enhance liquidity.

Responsibility: Team HYFI (Training provided to Diamond Owner's team)

10. Ongoing Compliance and Management

- A. Legal and Regulatory Compliance: Ensure continuous compliance with diamond trading laws and international regulations.
- B. Asset Management: Oversee the diamond assets and distribute any returns to token holders, if applicable.

Responsibility: Diamond Owner

5.5 Private Equity

1. Preliminary Actions

- ❑ A. Selection of Private Equity Assets: Identify and choose private equity assets, such as stakes in private companies, suitable for tokenization.
- ❑ B. Valuation and Due Diligence: Perform a thorough valuation of these assets and conduct due diligence to assess potential risks and returns.
- ❑ C. Legal and Regulatory Compliance: Ensure adherence to securities laws and regulations relevant to private equity and tokenization.
- ❑ D. Market and Investor Analysis: Analyze investor appetite and market dynamics for tokenized private equity offerings.

Responsibility: Private Equity Owner or Fund Manager

2. Creation of Tokenization Whitepaper

Develop a whitepaper detailing the project, covering the assets, token structure, rights and obligations of token holders, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Special Purpose Vehicle (SPV) Formation: Set up an SPV or equivalent legal entity to hold the private equity assets.
- ❑ B. Legal Terms for Token Holders: Define the relationship between the SPV and token holders, detailing their equity rights, profit-sharing, and voting powers.

Responsibility: Private Equity Owner or Fund Manager

4. AMA (Ask Me Anything) Session with Core Team

Organize an interactive session for potential investors to engage with the project team and ask detailed questions about the private equity assets.

Responsibility: Team HYFI and Private Equity Owner/Fund Manager

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing fractional ownership in the private equity assets on suitable blockchains like HYFI, Ethereum, Binance, or Polygon.

- ❑ B. Token Valuation: Determine the total number of tokens and their individual value based on the private equity valuation.
- ❑ C. Smart Contract Setup: Implement smart contracts to manage equity rights, distributions, and token transfers.
- ❑ D. Distribution Strategy: Plan the token distribution, including private sales, public offerings, and allocations to various investor categories.
- ❑ E. Listing on Exchanges: List the tokens on the HYFI Asset Marketplace and relevant digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Private Equity Owner/Fund Manager)

6. Marketing and Promotion

Develop and execute a marketing strategy to attract investors, utilizing various channels suitable for reaching private equity investors.

Responsibility: Team HYFI (Costs covered by Private Equity Owner/Fund Manager)

7. Token Sale Launch

Facilitate the token sale, ensuring a transparent and compliant process, with clear communication about the nature of the private equity investment.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular financial reports and updates to token holders on the performance of the private equity assets.

Responsibility: Team HYFI (Training provided to Private Equity Owner/Fund Manager's team)

9. Secondary Market Facilitation

Assist in facilitating the trading of tokens on secondary markets, crucial for providing liquidity in private equity investments.

Responsibility: Team HYFI (Training provided to Private Equity Owner/Fund Manager's team)

10. Ongoing Compliance and Asset Management

- ❑ A. Continuous Legal and Regulatory Compliance: Ensure ongoing adherence to securities and financial regulations.
- ❑ B. Management of Equity Assets: Oversee the management of the private equity assets and distribute returns to token holders as per agreed terms.

Responsibility: Private Equity Owner or Fund Manager

5.6 Rare Collectibles

1. Preliminary Actions

- ❑ A. Selection of Collectibles: Identify and choose rare collectibles that are suitable for tokenization, considering their rarity, market value, and appeal.
- ❑ B. Authentication and Valuation: Ensure each collectible is authenticated by experts and appraised for its current market value.
- ❑ C. Legal Compliance: Adhere to laws and regulations pertaining to the ownership, transfer, and trading of collectibles.
- ❑ D. Collector Market Analysis: Understand the collector market, including demand, investment trends, and potential investor interest.

Responsibility: Collectible Owner or Curator

2. Creation of Tokenization Whitepaper

Develop a detailed whitepaper outlining the tokenization project, including specifics of the collectibles, token structure, rights of token holders, risk factors.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Formation: Set up a legal entity, such as a trust or company, to hold and manage the collectible assets.
- ❑ B. Token Holder Relationship: Define the legal relationship between this entity and the token holders, including rights to returns from sales or exhibitions.

Responsibility: Collectible Owner or Curator

4. AMA (Ask Me Anything) Session with Core Team

Host an interactive session for potential investors to engage with the project team and inquire about the tokenized collectibles.

Responsibility: Team HYFI and Collectible Owner/Curator

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing fractional ownership or investment in the collectibles on blockchains like HYFI, Ethereum, Binance, or Polygon.

- ❑ B. Token Valuation: Decide on the total number of tokens and their individual value based on the collectibles' appraisal.
- ❑ C. Smart Contract Setup: Implement smart contracts to manage ownership, transfer, and profit-sharing from sales or exhibitions.
- ❑ D. Distribution Strategy: Plan for the distribution of tokens, including private sales, public offerings, and allocations for different investor categories.
- ❑ E. Marketplace Listing: List the tokens on the HYFI Asset Marketplace and relevant digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Collectible Owner/Curator)

6. Marketing and Promotion

Develop and execute a marketing strategy tailored to attract collectors and investors, utilizing appropriate channels.

Responsibility: Team HYFI (Costs covered by Collectible Owner/Curator)

7. Token Sale Launch

Conduct the token sale, ensuring a transparent and compliant sales process.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular updates to token holders on the status of the collectibles and any returns from sales or exhibitions.

Responsibility: Team HYFI (Training provided to Collectible Owner/Curator's team)

9. Secondary Market Facilitation

Assist in trading tokens on secondary markets to enhance liquidity and offer exit options for investors.

Responsibility: Team HYFI (Training provided to Collectible Owner/Curator's team)

10. Ongoing Compliance and Management

- ❑ A. Continuous Legal and Regulatory Compliance: Ensure ongoing adherence to laws and regulations relevant to collectibles.

- ❑ B. Asset Management: Oversee the care, preservation, and potential exhibition of the collectible items, distributing any returns to token holders.

Responsibility: Collectible Owner or Curator

5.7 Real Estate

1. Preliminary action

- ❑ A. Select a suitable real estate asset for tokenization.
- ❑ B. Conduct a professional valuation to determine its market value.
- ❑ C. Ensure compliance with local real estate laws and regulations for ownership and transfer.
- ❑ D. Understand and adhere to securities laws relevant to the issuance of tokens.

Responsibility: Real Estate Owner

2. Creation of Tokenization Whitepaper

Develop a detailed whitepaper outlining the tokenization project, including property details, token structure, rights of token holders, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Set up a legal entity (e.g., a special purpose vehicle) to hold the real estate asset.
- ❑ B. Define the relationship between this entity and the token holders.

Responsibility: Asset Owner

4. AMA (Ask Me Anything) Session with Core Team

HYFI will host an interactive session where potential investors and stakeholders can learn about the project and ask questions directly to the core team of the Asset Owner. This will be broadcast live on the relevant social media channels of HYFI and the Asset Owner.

Responsibility: Team HYFI and Asset Owner

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing fractional ownership or rights in the copyright material on suitable blockchains like HYFI, Ethereum, Binance, or Polygon.
- ❑ B. Decide on the total number of tokens and the value each token represents.

- ❑ C. Create smart contracts to automate the tokenization process, including terms of ownership, transfer, and possibly revenue distribution.
- ❑ D. Plan the distribution of tokens, including private sales, public offerings, and allocations for different investor categories.
- ❑ E. Listing on Marketplaces: List tokens on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Asset Owner)

6. Marketing and Promotion

- ❑ A. Develop and execute a marketing strategy to attract investors.
- ❑ B. Use various channels like social media, real estate forums, and traditional media.

Responsibility: Team HYFI (Costs covered by Asset Owner)

7. Token Sale Launch

- ❑ A. Launch the token sale, adhering to the planned distribution strategy.
- ❑ B. Ensure a smooth, transparent, and compliant sales process.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

- ❑ A. Manage the tokens post-sale, including transfer, trading, and buyback if applicable.
- ❑ B. Provide regular reports to token holders on property management, earnings, and other relevant updates.

Responsibility: Team HYFI (Training provided to Asset Owner's team)

9. Secondary Market Facilitation

Facilitate or provide guidance for trading tokens on secondary markets, enhancing liquidity.

Responsibility: Team HYFI (Training provided to Asset Owner's team)

10 Ongoing Compliance and Management

- ❑ A. Ensure ongoing legal and regulatory compliance.
- ❑ B. Manage the property and distribute returns (if applicable) to token holders.

Responsibility: Asset Owner

5.8 Structured Financial Products

1. Preliminary Actions

- ❑ A. Identification of Structured Products: Select structured financial products suitable for tokenization, considering their complexity, underlying assets, and risk-return profile.
- ❑ B. Risk and Reward Analysis: Perform a detailed analysis of the risks and potential rewards associated with the structured products.
- ❑ C. Legal and Regulatory Compliance: Ensure compliance with financial regulations and securities laws related to structured products and tokenization.
- ❑ D. Market Feasibility Study: Conduct a market study to understand investor appetite and the viability of tokenizing such products.

Responsibility: Structured Product Manager or Issuer

2. Creation of Tokenization Whitepaper

Develop a comprehensive whitepaper detailing the tokenization project, including specifics of the structured products, token structure, investor rights, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Special Purpose Vehicle (SPV) Formation: Set up an SPV or similar legal entity to hold and manage the structured products.
- ❑ B. Legal Terms for Token Holders: Clearly define the relationship between the SPV and token holders, including their rights to returns and obligations.

Responsibility: Structured Product Manager or Issuer

4. AMA (Ask Me Anything) Session with Core Team

Organize an interactive session for potential investors to learn about the structured products and ask questions.

Responsibility: Team HYFI and Structured Product Manager/Issuer

5. Tokenization Process

- ❑ A. Token Creation: Develop tokens representing ownership or investment in the structured products on blockchains like HYFI, Ethereum, Binance, or Polygon.
- ❑ B. Token Valuation: Determine the value of each token based on the underlying assets and structured product valuation.
- ❑ C. Smart Contract Implementation: Set up smart contracts to manage investment terms, distributions, and token transfers.
- ❑ D. Distribution Strategy: Plan the distribution of tokens, including private sales, public offerings, and categorization of investors.
- ❑ E. Exchange Listing: List the tokens on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Structured Product Manager/Issuer)

6. Marketing and Promotion

Develop and execute a marketing strategy to attract suitable investors, using channels that target the financial investment community.

Responsibility: Team HYFI (Costs covered by Structured Product Manager/Issuer)

7. Token Sale Launch

Facilitate the token sale, ensuring transparency and compliance with financial regulations.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular updates and reports to token holders about the performance of the structured products.

Responsibility: Team HYFI (Training provided to Structured Product Manager/Issuer's team)

9. Secondary Market Facilitation

Assist in facilitating trading of tokens on secondary markets, crucial for liquidity in structured product investments.

Responsibility: Team HYFI (Training provided to Structured Product Manager/Issuer's team)

10. Ongoing Compliance and Asset Management

- ❑ A. Continuous Regulatory Compliance: Ensure ongoing adherence to financial and securities regulations.
- ❑ B. Management of Structured Products: Oversee the performance and management of the structured products and distribute returns to token holders.

Responsibility: Structured Product Manager or Issuer

5.9 Tax Deeds

1. Preliminary Actions

- ❑ A. Identification of Tax Deed Properties: Select properties with tax deeds that are suitable for tokenization, considering their location, value, and legal status.
- ❑ B. Legal Due Diligence: Ensure the tax deeds are legally sound and the ownership transfer process complies with local and state laws.
- ❑ C. Property Valuation: Conduct a thorough appraisal of the property's market value.
- ❑ D. Risk Assessment: Evaluate risks related to property condition, market fluctuations, and legal challenges.

Responsibility: Tax Deed Holder or Managing Entity

2. Creation of Tokenization Whitepaper

Develop a detailed whitepaper outlining the tokenization project, including specifics of the tax deed properties, token structure, rights of token holders, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Setup: Form a legal entity, such as a trust or special purpose vehicle (SPV), to hold and manage the tax deed properties.
- ❑ B. Token Holder Relationship: Define the legal terms between this entity and token holders, particularly regarding property rights and profit distribution.

Responsibility: Tax Deed Holder or Managing Entity

4. AMA (Ask Me Anything) Session with Core Team

Host an interactive session for potential investors to engage with the project team and ask detailed questions about the tax deed properties.

Responsibility: Team HYFI and Tax Deed Holder/Managing Entity

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing fractional ownership or investment in the tax deed properties on suitable blockchains like HYFI, Ethereum, Binance, or Polygon.

- ❑ B. Token Valuation: Decide on the total number of tokens and their individual value based on the property valuation.
- ❑ C. Smart Contract Implementation: Set up smart contracts to manage ownership, transfers, and profit distribution.
- ❑ D. Distribution Strategy: Plan for the distribution of tokens, including private sales, public offerings, and investor categories.
- ❑ E. Listing on Marketplaces: Make the tokens available on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Tax Deed Holder/Managing Entity)

6. Marketing and Promotion

Develop and implement a marketing strategy to attract investors, using appropriate channels to reach a targeted audience.

Responsibility: Team HYFI (Costs covered by Tax Deed Holder/Managing Entity)

7. Token Sale Launch

Conduct the token sale, ensuring a transparent and compliant process.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular updates to token holders on property status, management, and any revenue generated.

Responsibility: Team HYFI (Training provided to Tax Deed Holder/Managing Entity's team)

9. Secondary Market Facilitation

Assist in facilitating the trading of tokens on secondary markets for liquidity and investor flexibility.

Responsibility: Team HYFI (Training provided to Tax Deed Holder/Managing Entity's team)

10. Ongoing Compliance and Property Management

- A. Legal and Regulatory Compliance: Ensure ongoing adherence to property and tax laws.

- ❑ B. Property Management and Distribution: Oversee the management of the properties and distribute any profits or returns to token holders.

Responsibility: Tax Deed Holder or Managing Entity

5.10 Whisky Casks

1. Preliminary Actions

- ❑ A. Selection of Whisky Casks: Identify and choose whisky casks that are suitable for tokenization, considering their age, distillery pedigree, rarity, and potential for appreciation.
- ❑ B. Authentication and Valuation: Ensure each cask is authenticated by whisky experts and appraised for its current and potential future value.
- ❑ C. Regulatory Compliance: Ensure adherence to laws and regulations regarding the ownership, storage, and trading of whisky casks.
- ❑ D. Market Analysis: Conduct an analysis of the whisky market, investor interest, and potential appreciation of the casks.

Responsibility: Whisky Cask Owner or Custodian

2. Creation of Tokenization Whitepaper

Develop a comprehensive whitepaper detailing the tokenization project, including specifics of the whisky casks, token structure, rights of token holders, risk factors, and legal considerations.

Responsibility: Team HYFI

3. Establishment of Legal Structure

- ❑ A. Legal Entity Formation: Create a legal entity, such as a trust or company, to hold and manage the whisky casks.
- ❑ B. Relationship with Token Holders: Define the legal relationship between this entity and token holders, including rights to potential profits from cask sales or bottling.

Responsibility: Whisky Cask Owner or Custodian

4. AMA (Ask Me Anything) Session with Core Team

Host an interactive session for potential investors to learn about the project and ask questions about the whisky casks.

Responsibility: Team HYFI and Whisky Cask Owner/Custodian

5. Tokenization Process

- ❑ A. Token Development: Create tokens representing fractional ownership or investment in the whisky casks on suitable blockchains like HYFI, Ethereum, Binance, or Polygon.

- ❑ B. Token Valuation: Decide on the total number of tokens and their individual value based on the whisky casks' appraisal.
- ❑ C. Smart Contract Implementation: Set up smart contracts to manage ownership, transfer, and profit distribution from potential sales or bottling.
- ❑ D. Distribution Strategy: Plan the distribution of tokens, including private sales, public offerings, and allocations for different investor categories.
- ❑ E. Marketplace Listing: List the tokens on the HYFI Asset Marketplace and digital asset exchanges.

Responsibility: Team HYFI (Costs covered by Whisky Cask Owner/Custodian)

6. Marketing and Promotion

Develop and execute a marketing strategy to attract investors, using channels suitable for reaching whisky enthusiasts and investors.

Responsibility: Team HYFI (Costs covered by Whisky Cask Owner/Custodian)

7. Token Sale Launch

Facilitate the token sale, ensuring a transparent and compliant process.

Responsibility: Team HYFI

8. Post-Sale Management and Reporting

Manage the tokens post-sale and provide regular updates to token holders on the status of the whisky casks and any potential returns.

Responsibility: Team HYFI (Training provided to Whisky Cask Owner/Custodian's team)

9. Secondary Market Facilitation

Assist in facilitating the trading of tokens on secondary markets to enhance liquidity.

Responsibility: Team HYFI (Training provided to Whisky Cask Owner/Custodian's team)

10. Ongoing Compliance and Cask Management

- ❑ A. Legal and Regulatory Compliance: Ensure ongoing adherence to regulations related to whisky storage, aging, and sales.

- ❑ B. Cask Management and Profit Distribution:
Oversee the care and potential sale of the whisky casks, distributing any profits to token holders.

Responsibility: Whisky Cask Owner or Custodian

Hybrid Finance Blockchain (HYFI)

HYFI is a Legally-compliant
Permissioned Layer-1 Blockchain
for Tokenization of Assets.



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