Tax & Block™: A Peer-to-Peer Electronic Tax Ecosystem

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In whatever you do, make sure that your work lies along with your eternity with GOD whose HOLINESS remains the benchmark for without which no one will see THE LORD as the day of HIS RETURN draws closer in front of us here.

<< A citation from Prophets Dr. David Owuor, former US Cancer Researcher and Professor of Pharmaceuticals whose mysterious and prophetic marks have openly revealed who THE TWO DREADFUL WITNESSES OF REVELATION 11 are. >>

NOTE: For updates and discussions about the project whose launch is coming up soon, please join our community chat list.

Abstract. An ecosystem of tax Apps and services that use machine-enforceable Inter-Blockchain Communication (IBC) protocol to exchange digital assets and data. Tax & Block, a trademark of Pitshou Solutions LLC, aims to provide the best tax filing solutions that reshape tax professionals' businesses, meet taxpayers' needs, and potentially serve as a high-impact use case for tax administration

improvement using blockchain technology. In the presence of intense competition going on between tax preparation software and tax preparation services, most taxpayers primarily opt for tax preparation software to save some cash. While the tax software option offers flexibility and upfront money saving, this underscores the potential of getting out of your hard work and the maximization of tax returns and/or minimization of tax liability in the back end, especially when dealing with complex taxes. Additionally, the tax system complexity increasing with the current exponential growth of both interests and investments such as in crypto assets brings about risks of audits that may also end up with legal actions in case of tax fraud.[1] Finally, the unnoticed tax expectations gap amplifies losses in the tax administration. We propose a *blockchain network* that combines both the advantage of the tax preparation software flexibility and affordability as well as the benefits of letting taxpayers get matched with tax experts to get their tax return filings done at zero or low monetary costs depending on tax forms' complexity. Doing so, Tax & Block subsequently unleashes a distributed file storage system as an alternative to big companies' centralized systems for the benefits of individuals and small businesses that care about data ownership and high-standard security. Furthermore, Tax & Block leverages Cosmos technology *to* lay out a complete blockchain framework that facilitates the development of Tax Marketplace-Specific Blockchains (TMSBs) in a few lines of code to comply with different countries' tax systems. Finally, to support blockchain platform operations, and real-time payment transactions as well as stores of value, various tokens including a native cryptocurrency or coin named T&B make up the peer-to-peer electronic tax ecosystem.

1. Introduction

Bitcoin, the pioneer of peer-to-peer electronic cash systems, has challenged financial systems worldwide by winning a battle that dramatically innovates with a transparent and resilient way of handling electronic payments without trusted third parties using blockchain technology. By removing third-party services such as central banks and other financial institutions, Bitcoin has successfully cut down transaction costs. Similarly, Ethereum, the pioneer of smart contracts, has revolutionized blockchain applications based on the foundation lied upon by Bitcoin technology. In blockchain applications that are always improving, Cosmos

[1] Deloitte. "Crypto asset management: Managing the tax expectations gap". Accessed Jan. 2023, https://www2.deloitte.com/content/dam/Deloitte/us/Documents/Tax/us-crypto-asset-management-01.pdf.

Network, known as the internet of blockchains, has solved the technical challenges related to blockchain interoperability and scalability to allow independent blockchains to communicate with each other while hastening transactions drastically with the capacity of handling up to 10,000 transactions per second (TPS).[2]

However, transactions that deal with multiple income streams and/ or investments require caution concerning tax reporting. For instance, with the successful launch of various emerging decentralized autonomous organizations (DAOs) including games running on blockchain platforms such as Ethereum, the exponential growth of both interests and investments has brought about complexity such that taxpayers who are involved in crypto transactions become at risk of facing financial loses and/or legal challenges for tax reporting misrepresentations. The lack of clarity in the current US Internal Revenue (IRS) guideline creates uncertainty about how to pay taxes correctly without the risk of falling into a tax gap. "*In the absence of full guidance, players in this space need to proceed with caution to better manage the expectations gap between what they think or assume is the right tax treatment and what may well prove to be true in the event of an IRS audit*."[3] Therefore, relying on tax preparation software alone can be misleading. While using reputable tax preparation software to file your taxes sounds like a smart solution, some of the money that you deserve from your hard work may sometimes be overlooked and evade your pocket.[4]

Furthermore, businesses and consumers dealing with cryptocurrencies need to understand that tax reporting is a lifecycle process that does not end after filing taxes. For instance, the new bill that has modified the US anti-money-laundering cash reporting requirements of 26. U.S.C. section 6050I includes digital-asset transactions such that crypto tax reporting turns out to be a

[2] Koh, Julia; Hoy, Cheryl. "A-to-Z of Blockchain Consensus". Feb. 2019, https://medium.com/tendermint/a-to-z-of-blockchain-consensus-81e2406af5a3.

[3] Deloitte. "Crypto asset management: Managing the tax expectations gap". Accessed Jan. 2023, https://www2.deloitte.com/content/dam/Deloitte/us/Documents/Tax/us-crypto-asset-management-01.pdf.

[4] CRS CPAs. "9 Simple Accounting Mistakes That Are Costing Your Business Money". Dec. 2022, https://crscpa.com/wp-content/uploads/2021/02/9-Simple-Accounting-Mistakes-Final.pdf?utm_source=ActiveCampaign&utm_medium=email&utm_content=Your+Guide+to+Avoiding+9+Accounting+Mistakes&utm_campaign=Email+%231+-+Thanks+for+downloading&vgo_ee=EwnCHgROdEz7Q%2BlS9UucH%2FlMy%2BOWWuyaZunZiCXh6gI%3D.

non-one-time event.[5] Therefore, taxpayers involved in various types of transactions need to work with tax experts who understand tax law and processes, which the tax authorities have established.

On the other hand, despite the current regulatory framework, the tax administration continues to suffer from tax administration inefficiencies.[6] For instance, tax professionals' business opportunities can be strengthened to mitigate the costs related to the implementation of audits. This can help avoid unwillingly tax reporting misrepresentations or errors that common taxpayers may make on their end, which triggers the potential of costly audits. Although, as Mazur said, "… *any blockchain tax initiative is unlikely to make meaningful improvements to tax processes without additional government action"*, high-impact blockchain solutions will definitely serve as a use case for policymakers to come up with a comprehensive regulatory framework that leads to the revolution of tax administration eliminating large tax gap.

To date, even though crypto users rely on crypto tax software to generate tax reports and submit them to tax professionals to file their taxes, leveraging blockchain technology in the tax systems comes with unmatched application capabilities that systematically improve operational efficiencies for the benefits of both taxpayers and tax professionals. Instead of relying on centralized systems, blockchain uses several technologies that includes Distributed Ledger Technology (DLT) and digital signatures to record transactions in a set of blocks that are cryptographically secured with hashes while providing data immutability and transparency. *"Each transaction is encrypted and identified by a cryptographic signature that is chained to the previous block through additional cryptographic keys. This allows for the blockchain to be a shared, immutable source of truth as each block stores a hash or signature of the previous block."*[7] With such

[5] Deloitte. "Information reporting of crypto: The big picture
The process doesn't end once you file your Form 1099s." Jan. 2023,
https://www2.deloitte.com/us/en/pages/tax/articles/information-reporting-of-crypto-the-big-picture.html?reporting-of-crypto=.

[6] Mazur, Orly. "Can Blockchain Revolutionize tax administration". Accessed Jan. 2022,
https://scholar.smu.edu/cgi/viewcontent.cgi?article=2026&context=law_faculty.

[7] IBM Storage. "Storage Needs for Blockchain Technology - Point of View". Accessed Jan. 20233,
https://www.ibm.com/downloads/cas/LA8XBQGR#:~:text=Using%20the%20most%20conservative%20estimate,storage%20per%20year%20is%20required.

functionality, intermediary operations are eliminated. For instance, cryptocurrency applications provide real-time payments via a peer-to-peer network of participants without trusted third-party services such as financial institutions, escrow services, and beyond. Such a blockchain application will significantly cut costs down from both the payee's and the payer's perspectives. This reality has become practical thanks to the Bitcoin technology that ingeniously solved the double-spending problem as set in the introduction of their Proof-of-Work protocol.[8] Blockchain technology makes transactions safe and cheaper while using the internet.

Additionally, with the Ethereum blockchain's introduction of smart contracts, trust has become a matter of computational agreements consigned, in most cases, into just a few lines of code that govern various types of transactions upon pre-defined conditions. Applying blockchain applications such as cryptocurrency and smart contracts in the tax systems essentially improve operational efficiencies.

Therefore, by tapping into tax systems, we propose Tax & Block, a blockchain ecosystem whose foundation is built with a five-blockchains-layered infrastructure as a tax-chain that is conceptualized to tackle tax preparation business inefficiencies and to allow taxpayers fulfill their tax obligations with peace of mind while empowering tax professionals to handle more jobs in a secured, resilient, and decentralized way. Isn't it feasible to use Tax & Block to simultaneously address high costs and liability risk concerns that arise in tax preparation businesses?

2. Tax-chain: The Backbone of the Tax & Block Ecosystem

Relying on five-blockchain layers, the tax chain is made to be secured by a set of full nodes run by validators whose competitive economic incentives are defined in the Proof-of-Stake consensus protocol. Meanwhile, the implementation of IPFS protocol and digital sharding-enabled nodes run by Shard Hosting Service Providers (SHSP) or "Famers" across various geographic regions around the world

[8] Nakamoto, Satoshi. "Bitcoin: A Peer-to-Peer Electronic Cash System". Last visited Feb. 2023, https://www.ussc.gov/sites/default/files/pdf/training/annual-national-training-seminar/2018/Emerging_Tech_Bitcoin_Crypto.pdf.

makes up a decentralized and distributed file storage capability to support preparations of income tax returns for small businesses, self-employed and beyond.

Therefore, by organizing peer-to-peer networks among contributors, developers, and users, the Tax & Block ecosystem forms a platform that gathers various communities worldwide working together in pursuing common economic-social interests and visions evolved around citizens' tax obligations compliance done with peace of mind in a secured, transparent and decentralized way.

The five blockchain layers below, which were also mentioned earlier, lay out a public multi-blockchain infrastructure whose Hub is set to manage the deployment of Tax Marketplace-Specific Blockchains (TMSBs) that participate in the Tax & Block ecosystem.

- Tax & Block Preparer
- Tax & Block Hub
- Tax & Block Swapper
- Two Tax & Block Bridges

Illustration of the Tax & Block Ecosystem

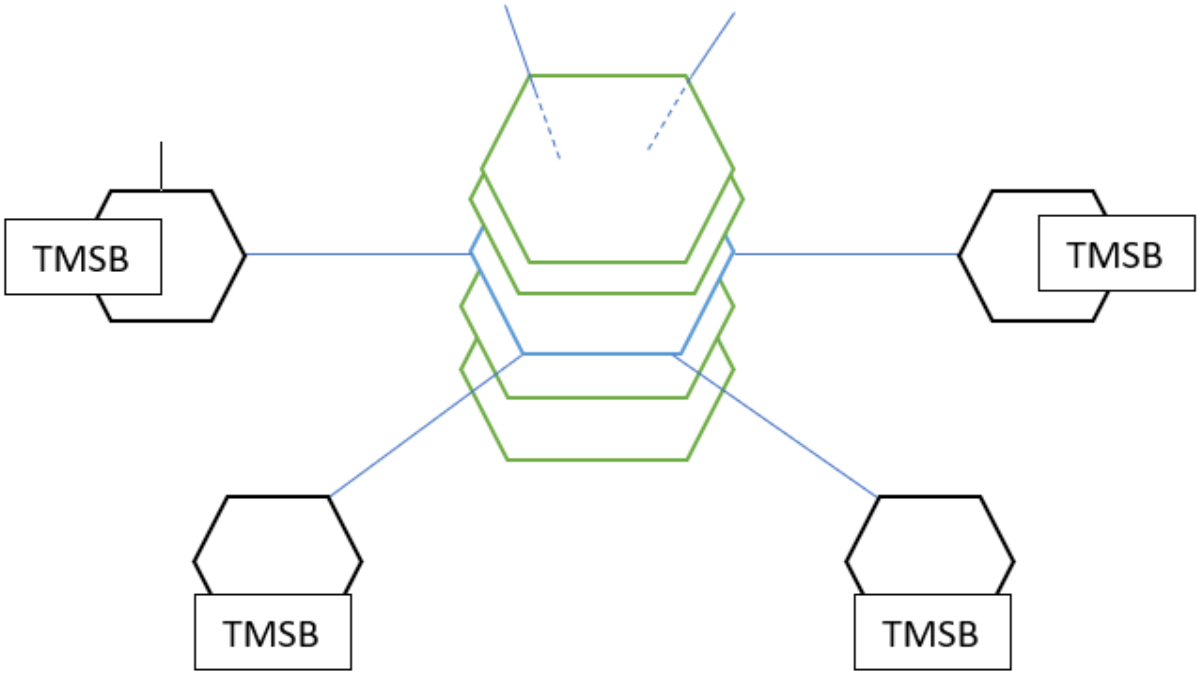


Figure 3. The five blockchain layers of the tax-chain are surrounded by TMSBs that are deployed in the Tax & Block Hub forming the Tax & Block ecosystem.

2.1. Preparer: The Tax & Block Framework for Tax Marketplace-Specific Blockchains (TMSBs)

The Tax & Block Preparer constitutes a TMSB use case that provides an open-source framework to develop other TMSBs. The Tax & Block Preparer brings about the US Tax Marketplace-Specific Blockchain (US TMSB) to connect US-based taxpayers with US IRS-registered tax professionals to file taxes without intermediaries. Doing so, all the transactions occur in peer-to-peer networks that ensure transparency and data immutability. Firstly, by applying blockchain storage applications such as digital sharding, the US TMSB creates a distributed file storage system that can be run by nodes, operated by SHSPs, across various servers (be it computers or even smartphones) around the world such that pieces of a file or shards, stored in them, are separated from one another to prevent a

single point of failure and potential cyber-attacks. Storing files such as tax documents will undergo a process that consists of splitting files into shards, encoding and hashing them to connect transactions occurring in the blockchain ledger with their corresponding shards. While the encoded shards are distributed across a network of geographically located servers, no one except the owner of the files can access them.

Secondly, a decentralized tax reporting application allows users to generate their tax reports featuring all the transactions that they have been involved in internally or externally. For instance, crypto users will have the ability to upload their transaction histories captured from their wallets or crypto exchanges into a decentralized tax reporting system to generate complete tax reports.

Thirdly, the US TMSB, using the IPFS protocol, allows taxpayers to share their tax documents that are distributed across multiple servers, with their designated or chosen Tax Preparation Service Providers (TPSPs). Taxpayers can send encrypted messages based on digital signatures and share their tax documents to give access rights to tax professionals using their broadcasted public keys. Furthermore, the private keys owned by tax professionals will let them decrypt any encrypted messages, access any shared documents, and allow them to complete the tax filing process. Upon tax filing, the tax returns and other relevant documents can be returned to the taxpayers following similar storing and sharing processes as described previously. The breaking up of files stored separately from one another across a set of nodes geographically located allows reaching optimum security preventing hackers from accessing stored files even in the event of data transfer under which security related to centralized networking becomes compromised.[9]

Subsequently, the introduction of T&B, a new cryptocurrency or coin, eliminates the use of fiat currencies from payment processing, which significantly cuts the cost down as intermediaries such as Swift network for debit/credit card processing and escrow third-party services are all removed from the system. While the system enables free tax services to qualified users, the US TMSB allows users to decide how much they can afford to get their tax returns done promptly.

[9] AXEL. “Why Digital Sharding is the Future of File Storage”. Mar. 2022, https://www.axel.org/2022/05/27/why-digital-sharding-is-the-future-of-file-storage/.

Making tax preparation services cheaper and more flexible will mostly drive taxpayers to tax professionals and allow them to manage concerns related to the tax expectations gap more adequately and responsibly.

Finally, the open-source nature of the Tax & Block Preparer makes it a framework for the development of other tax marketplace blockchains that are specific to each country's tax jurisdiction. While tax systems typically differ from one country to another, taxpayers will be given the same functionality that allows them to fulfill their tax obligations with the help of tax experts at affordable costs or for free in some cases. By using Cosmos SDK and Tendermint, developers or holders of App connectivity tokens will have the framework to work with and build Tax Marketplace-Specific Blockchains (TMSBs) using just a few lines of code. Consequently, they will save themselves a lot of time that could have been devoted to developing an entire blockchain network from scratch. While the deployment of multiple TMSBs makes up the Tax & Block network, blockchain scalability becomes a necessity.

2.2. Hub: The Engine of the Tax-chain

Based on business objectives and needs, various solutions lead to blockchain scalability that includes state channels, sidechains, sharding, blockchain interoperability and alternative cryptographic algorithms.[10] The Tax & Block Hub relies on blockchain interoperability to allow communications between independent blockchains while ensuring scalability. The Tax & Block Hub is set to record the state of blockchain networks in real time using the Inter-Blockchain Communication (IBC) protocol. For instance, when an on-chain transaction occurs between two users from two different blockchains such as user A sends a coin to user B, the same transaction is recorded in both blockchain ledgers separately in a way such that the state of one blockchain network is not known from the other one. However, the Tax-chain Hub will help to keep a record of both blockchains to ensure appropriate accountability. The Tax & Block Hub ensures the exchange of digital assets and data between blockchains while managing the state of all blockchain networks to prevent fraud or misuse.

[10] Shermin Voshmgir, Token Economy: How the Web3 reinvents the internet (Berlin: Token Kitchen, 2022), 342-348.

In addition, the Tax & Block Hub acts to secure the tax-chain infrastructure with a set of a maximum of 100 validator nodes that are replicated to secure each blockchain of the tax-chain thanks to competitive economic incentives as defined in the Proof-of-State protocol. The incentives allow bonded validators to run full nodes to broadcast cryptographic signatures in the blockchain network which includes verifying transactions, adding blocks to the blockchains, as well as participating in the governance. While users are not allowed to directly stake Tax & Block coins and delegate them to validators, users can still stake Tax & Block through third-party staking providers to become delegators externally.

Finally, the Tax & Block Hub serves as a platform that allows developers to deploy TMSBs in each country's jurisdiction. As mentioned earlier, using the Tax-chain Preparer framework, developers can quickly build and deploy their blockchains to Tax-chain Hub and populate the Tax & Block ecosystem. As the Tax-chain Hub is set to interoperate with the Cosmos ecosystem as one of the Cosmos chains, holders of other Cosmos chain coins will have direct access to the Tax & Block ecosystem as well through IBC protocol-enabled wallets. This opportunity will allow free interactions without intermediaries. Doing so, the Tax-chain Hub turns out to be the engine of the tax chain.

However, as fiat currencies are not part of the business model, intermediaries such as crypto exchanges will require the users to pay additional costs. To eliminate crypto exchange services, Tax & Block users need to be supplemented with a Distributed Exchange (DEX) that removes crypto exchange intermediary costs.

2.3. Swapper: The Tax & Block Distributed Exchange

To facilitate interactions of crypto holders with the Tax & Block ecosystem, we include the implementation of a custom Decentralized Exchange (DEX) that provides users with the possibility to swap their existing coins with Tax & Block coins while recording transactions in the blockchain ledger. While non-crypto users willing to participate in the network will need to acquire existing coins through external crypto exchanges or other means first before transferring them to their IBC protocol-enabled wallets, provided to them upon sign-ups, the

Cosmos networks' users can exchange their respective coins with Tax & Block coins directly through Automated Market Maker (AMM) pools that make up the coin swapping facility. Investors will be invited to stake trading pairs of coins to provide their services as liquidity providers and facilitate direct coin exchanges. Doing so, they will receive, in return, liquidity provider tokens that grant them service fees and block rewards under specific conditions as defined in the monetary policy. As liquidity provider tokens are not locked up, their holders can perform other activities. While liquidity staking opens other business opportunities, only contract token holders can stake internally. The Swapper facilitates cryptocurrency exchanges without intermediaries to allow taxpayers to acquire Tax & Block coins and fulfill their tax obligations with the help of tax experts at affordable costs or for free in some cases.

While the Tax & Block Swapper ensures direct access for Cosmos networks' users through IBC protocol enabled-wallets, other crypto users such as Bitcoin and Ethereum users cannot directly participate unless bridges connect their respective blockchains to the Tax & Block ecosystem.

2.4. **Bridges: The Blockchain Extension for Bitcoin and Ethereum Users**

To enable other blockchain holders to interact with the Tax & Block network directly, Tax & Block bridges come essentially to remove additional costs. In fact, without bridges, non-Cosmos network users will first have to swap their respective cryptocurrencies with one of the cryptocurrencies whose blockchains are part of the Cosmos network. The next step will be to acquire Tax & Block coins, which creates an additional cost due to intermediary steps. We propose two bridges that link Ethereum and Bitcoin blockchains to the Tax & Block ecosystem removing extra costs. Otherwise, the holders of the two major coins as established in the crypto industry such as ETH and Bitcoin, whose market capitalization is worth US $ 674 billion[11] would be left behind with increased transaction costs and make the Tax & Block ecosystem less efficient. While the ideal would be to include all blockchain networks that are not connected to the Cosmos ecosystem, the practical solution with the two use cases makes it a good

[11] CFI Team. "Top 10 Cryptocurrencies
What are the largest cryptocurrencies?" Accessed Feb. 2023,
https://corporatefinanceinstitute.com/resources/cryptocurrency/top-10-cryptocurrencies/.

starting point. The two blockchain bridges ensure Tax & Block's comprehensive extension by incorporating two of the major coins in terms of their huge market capitalization values.

Applying simultaneously distributed file management and tax reporting, cryptocurrency, interoperability, swapping, and bridging blockchain applications, the tax-chain creates an innovative networking infrastructure under which the Tax & Block ecosystem takes place to tackle tax preparation business inefficiencies worldwide. To support a platform of decentralized applications, the tax-chain through its Hub requires a machine-enforceable Inter-Blockchain Communication (IBC) protocol with an innovative macroeconomic policy that ensures Tax & Block ecosystem stability and growth.

3. Tax-chain Macro-Economic Policy:

3.1 Genesis Block Reward

The Tax & Block genesis block is set to create 200 million T&B at the launch of the multi-layered blockchain network and the initial price of the T&B with respect to fiat currency such as the US dollar will be determined as follows: 1 T&B = US $ 0.1.

While 100 million T&B out of the genesis block supply are essentially reserved to make up the Swapper supply for the implementation of Automated Market Marker (AMM) pools, the remaining 50% will be split into six groups. First, the genesis block will allocate 13.65 million T&B to the company's Founder for being the initiator and architect of the Tax & Block ecosystem who has managed the Tax & Block development project that aims to deliver on the feature set defined in this present paper.

Secondly, 60 million coins will go to Pitshou Solutions LLC member managers so that they can conduct project marketing, commit to building Tax & Block's communities as well as manage Tax & Block's treasury. However, this portion of the genesis block reward is set to be bonded for five years with a one-year cliff.

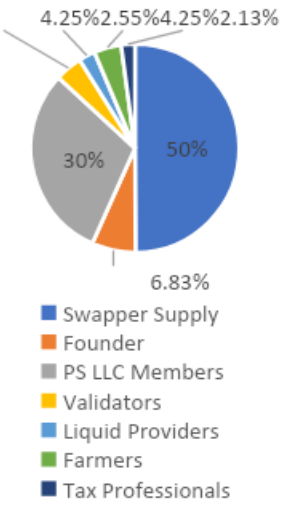
In addition, the genesis blocks reward grants to the validator pool, regardless of staked tokens, with a special incentive for 8.5 million coins. 50% of the validator allocation amount is set to be distributed equally to each validator

based on blocks added to the blockchain by each one of them for the first time starting from the genesis block. While validators will be selected on a first come first served basis up to 100 recipients only, the remaining 50% is reserved to grant those who have also started providing T&B staking as a service in their respective sites. However, the validator allocation is set to be bonded for one year (Interest in terms of block rewards is triggered upon staking). The remaining amount of the genesis block reward allocation will be burnt when governance decides to.

Subsequently, the amount of 8.5 million T&B will be allocated to SHSPs or "Farmers" with equal distribution to each one of them based on a first come first served basis in exchange for their first services. While the number of farmers running the IPFS nodes will be unlimited, this portion of the genesis block reward applies to 100 recipients per zone geographically located in five regions around the world only. However, the genesis block reward is set to be bonded for one year cliff vesting period (no interests apply during the first year).

Furthermore, 5.1 million coins out of the 200 million genesis block reward will be granted to Liquidity Providers on the merit of their service offering. Upon Swapper T&B supply, the first 50 liquidity providers with the highest trading pairs of coins, provided to run AMM pools, will receive the grant whose distributions are based on their respective contributions. While creating AMM pools does require a minimum amount of the trading pairs of coins, the genesis block reward will require that the overall trading pairs of coins provided to run an AMM pool correspond to at least 50% of the pre-defined liquidity budget for the AMM pool to claim the reward allocation. Finally, the portion of the genesis block reward is set to be bonded for one year cliff vesting period (no interests apply during the first year).

Finally, 4.25 million T&B will be granted to US-based Tax Preparation Service Providers (TPSPs) enrolled in the Tax-chain



Program (TCP) and will be equally distributed to each one of them when they provide their first tax services. While the number of US-based TPSPs participating in the TCP will be unlimited, the genesis block reward applies to qualified US IRS-registered tax professionals selected on a first come first served basis up to 100 recipients only. However, this portion of the genesis block reward is set to be bonded for one year cliff vesting period (no interests apply during the first year).

Genesis Block Reward Distribution

Figure 4. The genesis block distribution includes a 50% Swapper supply to support the implementation of AMM pools and other actors involved in the Tax & Block project.

3.2. Issuance

The T&B monetary policy is designed to eliminate inflation over time while balancing tax-chain adoption, investments and growth to strengthen the new token economy without compromising the security of the ecosystem. The initial phase of the T&B issuance starts with the genesis block (Block 0) whose details have been discussed above. While the goal is to end up with a limited Tax & Block coin total supply by suppressing inflation, the T&B issuance model is set to increase the T&B supply in the short to midterm until new Tax Marketplace-Specific Blockchains (TMSBs) start flourishing in the Tax & Block ecosystem. While TMSBs are set to eliminate inflation over time, the T&B supply won't be affected for up to three years.

To secure TMSBs, the Tax-chain Hub validator nodes will be replicated to secure the TMSBs in return payments will be made in T&B only while being accumulated in the distribution module for 3 years upon which issuance will start getting cut and consumed in exchange with the amount of accumulated Tax-chain Security from the previous year. If the Tax-chain Security accumulation from the previous year matches with the issuance, the issuance will be completely consumed without going into circulation and entirely replaced by Tax-chain Security upon which a maximum T&B supply, from which also derives the T&B total token supply limit, becomes achievable. If so, stopping inflation will create scarcity in the market that can positively affect stores of value, investments and growth. Although the T&B maximum supply is achievable, the issuance will resume going into circulation in case of unexpected conditions that cause a

trade-off gap. On the other hand, a surplus of the accumulated Tax-chain Security from the previous year will add up to validator block rewards.

As mentioned previously, the genesis block reward will be allocated to a set of contributors including Pitshou Solutions LLC participations and 86.35 million T&B are set to be locked up for at least one year before they are made available to beneficiaries according to the schedule as mentioned earlier. Meanwhile, a transition phase will start at the production of the 101^{st} block (block 101) if each of the 100 validators has at least created one block. Additionally, the beginning of the transition phase will trigger the implementation of regular block rewards for the benefit of bonded validators only. While 95% of the monthly issuance portion that is allocated to validator block rewards will go to validators, the remaining 5% that is allocated to the community pool that includes a core of code developers and funds will be used for bounties and upgrades allocation through governance.

Furthermore, validator block rewards are set every year to equal one-third of the initial total supply, and the annual issuance is determined based on one-third of the total supply of the previous year. The difference between issuance and validator block rewards, which includes the community pool reward allocation as well, will fund the investor pool that encompasses LP, SHSP, TPSP, and Pitshou Solutions LLC stakeholders. For instance, the portion of the issuance that goes to investors as block rewards after a one-year cliff vesting period will be distributed respectively as follows:

- 51% goes to the LP pool.
- 22% goes to the SHSP pool.
- 22% goes to the TPSPs pool.
- 5% goes to Pitshou Solutions LLC stakeholders.

Therefore, assuming that the monthly issuance portion that goes to the validators' pool is considered a Security Subsidy and the issuance consumption corresponds to a tradeoff between issuance and Tax-chain Security, we'll get the following:

Security Subsidy = $(4.625 \times 10^5 \text{ t}) \times 0.95$ over the course of three years.

0 if issuance ≤ tax-chain security.

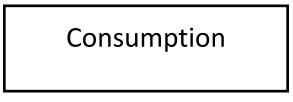
As a result, the T&B issuance will no longer end up in circulation if it becomes equal to or less than the Tax-chain Security. While validators' block rewards are expected to continue increasing over time with a Tax-chain Security surplus, the Tax-chain Security is first set to end inflation by quenching the Security Subsidy as well as the portion of the issuance that goes to investors. Although this scenario is feasible as more TMSBs get deployed in the Tax & Block ecosystem over time, Pitshou Solutions LLC will play a central role by enforcing the Tax & Block monetary policy through grant provisions to support developers to implement TMSBs whose impacts aim to stop inflation, add token values and attract more investors.

3.3. Fee

The T&B fiscal policy addresses fee distribution based on funds generated respectively from Tax-chain Security, transaction fee and issuance. Payments in terms of T&B generated from securing TMSBs, except US TMSB, are collected through Tax-chain Security to reward validators, community pool and investors via the distribution module as a trade-off with issuance consumption. The Tax-chain Security is set to replace the issuance over time as previously explained.

As there will be no TMSBs other than US TMSB at the launch of the Tax & Block network and taking into consideration the time it will take to get TMSBs populated in the network, the issuance is made to ensure the security of the tax chain and beyond. While 98% of transaction fees paid by users go to validators to secure the tax chain, 2% goes to the community pool whose funds are managed through a governance system. Subsequently, the Tax & Block treasury comes from resources generated by Tax-chain Preparer and Tax-chain Swapper while extracting providers' service fees. While service fees generated from the Swapper go to Liquidity Providers (LP), the ones generated from Preparer will hand up in the hands of Shard Hosting Service Providers (SHSP) and Tax Preparation Service Providers (TPSP) as well.

Tax-chain Fee Distribution



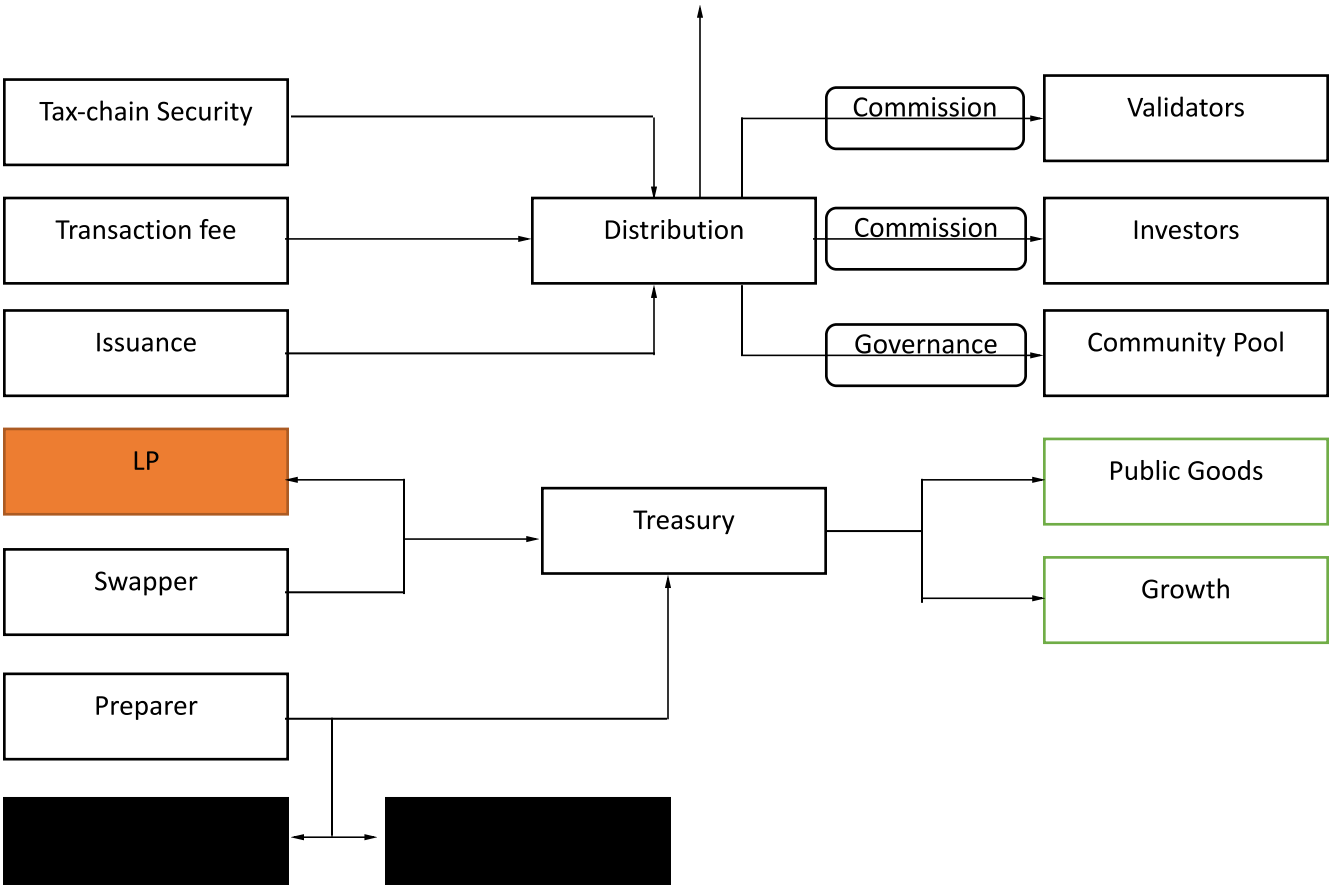


Figure 5. Tax-chain overall fee distribution that takes into consideration all five blockchain layers. The Tax-chain Security generated from TMSBs, except the USTM, replaces issuance incrementally as TMSBs are deployed in the Tax & Block ecosystem.

4. Tax-chain Economic Engine: The Tax Purpose-Driven Token System

The Tax-chain brings about a new economy based on tax purpose-driven tokens that bring together taxpayers, and various service providers such as TPSPs, SHSPs and LP. While taxpayers need T&B to perform their activities in the Tax & Block ecosystem, Tax & Block service providers need T&B to stake them in exchange with unlocked tokens that ensure they get service fees as well as block reward incentives, which start at the end of one year cliff vesting period. For instance, the amount of preparation tokens given to Tax Preparation Service Providers (TPSPs) in exchange for their stakes determines the staking power of each TPSP upon which the block reward is calculated. While the IPFS tokens provide block rewards to Shard Hosting Service Providers (SHSPs) based on their respective stakes, the

liquidity provider tokens guarantee block reward incentives for Liquidity Providers (LPs). Similarly, advertising tokens regulated in the TCP guidelines grant paid tax service job opportunities to tax professionals.

To increase the liquidity of the market and expand activities, the Tax-chain provides additional business opportunities to unlock tokens such as IPFS, preparation, advertising, and liquidity provider tokens. While staking internally as validators, LPs, SHSPs, TPSPs, developers and Pitshou Solutions LLC member managers are permitted, attempting to delegate T&B to anyone and start earning rewards in return as a delegator can only be performed in the third-party staking sites.

In comparison to the mobilization of cars owned by drivers using Apps to perform ride-sharing operations as companies such as Uber and Lyft rely on, Tax-chain leverages the Swapper and Preparer as tools to facilitate tax-related peer-to-peer networking operations governed by administrative algorithms that require no third-party services. As a broad range of cryptocurrencies will be swapped with Tax & Block directly through the Tax & Block Swapper, taxpayers will be able to fulfill their tax obligations efficiently through TMSBs whose framework originates from the Preparer. The loops formed between Tax & Block Swapper and Preparer are essentially made to facilitate taxpayers' direct participation in the network such as making payments in exchange for getting their tax returns done at an affordable cost or for free depending on the tax complexity forms involved.

Illustration of the Tax-chain Economic Engine

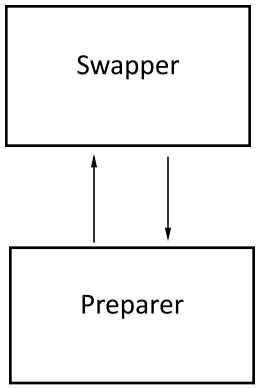


Figure 6. The loops connect Tax & Block Preparer with Swapper to make up the tax-chain economic engine that powers the Tax & Block token economy.

To enforce the decentralization nature of the Tax & Block ecosystem, the decision-making process will be made based on social consensus as organized through hybrid governance.

5. Tax-chain Governance

Tax-chain Governance relies on on-chain and off-chain mechanisms whose differences vary based on process types. To facilitate discussions and ensure transparency in decision-making processes, vote rights are guaranteed through governance tokens. While all users are allowed to submit proposals that may improve the Tax & Block ecosystem operations, the implementation of decisions relies on a core of developers for coding purposes.

Depending on the nature of the proposals, the on-chain governance deals with proposals that can be implemented on the blockchain right away upon approval as no changes in such proposals will be allowed. According to the needs of proposal draft feedback, discussions can start taking place off-chain in the designated social media upon which the amended proposals can be later introduced on-chain for voting to automatically implement the upgrades.

Although proposals related to protocol upgrades or a core code development team provide any changes, the decision-making process involves all the contributors that participate in the social governance consensus. Meanwhile, to prevent conflicts of interest that may arise in the social governance, a veto in favor of Pitshou Solutions LLC may apply. The hybrid governance nature of the tax-chain reflects the attribute of a decentralized application network driven by machine-enforceable protocols that ensure transparency throughout the decision-making process.

6. Conclusion

The blockchain and cryptocurrency industry has grown up rapidly despite a short period since Bitcoin made it possible, almost a decade ago after the US financial

collapse in 2008[12], by fixing the double-spending concerns that previously failed to deliver decentralized network solutions for peer-to-peer value transfers[13]. As the tax systems become complex with the exponential growth of both interests and investments in cryptocurrencies and game-based tokens, taxpayers cannot rely on tax preparation software alone to get their tax obligations done unless they face potential financial losses and/or audits. Leveraging blockchain technology to tap into tax systems worldwide, the Tax & Block ecosystem is strategically positioned as the blockchain solution for Bitcoin, Ethereum and Cosmos networks' crypto holders and beyond.

7. Disclaimer

This paper is a contribution effort by Pitshou Solutions LLC that aims to improve tax preparation business efficiencies. It outlines a blockchain infrastructure and network of systems governed under a social consensus mechanism. While the proposed paper presents comprehensive information about the features and functionality of the Tax & Block network project, some aspects of the project are subject to change before the blockchain software launch if needed. Otherwise, the proposed project, after the launch, may change at any time by the Tax & Block community to achieve common objectives. Although the information provided in this paper is based on projected previsions, assumptions and knowledgeable considerations presented in good faith, unexpected conditions or circumstances are not excluded as well as accuracy and completeness of the paper are not guaranteed herein. That said, every reader of this paper is encouraged to perform their due diligence as the material is presented to them for information purposes. Additionally, this paper is not financial advice, trading advice, investment advice or any sort of advice and no one is recommended to use it for any investment decisions of any kind without seeking first the assistance of a financial adviser. Therefore, by relying on the present paper, the reader agrees that neither Pitshou Solutions LLC, Tax & Block community, Tax & Block partners, nor any Tax & Block affiliates have any responsibility or any liability whatsoever to you or any of your third parties, affiliates, or employment-related relationships in result from the use of the information mentioned herein.

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[12] Porat, Amitai; Pratap, Avneesh; Shah, Parth; Adkar, Vinit. “Blockchain Consensus: An analysis of Proof-of-Work and its applications.” Accessed Nov. 2022, https://www.scs.stanford.edu/17au-cs244b/labs/projects/porat_pratap_shah_adkar.pdf.

[13] Shermin Voshmgir, Token Economy: How the Web3 reinvents the internet (Berlin: Token Kitchen, 2022), 116.

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