Bitcoin Suisse Global Crypto Taxonomy

Version 1.1.0 - February 2024

Bitcoin Suisse Global Crypto Taxonomy Board





Contents

1.	Introduction	3
2.	Design	4
	2.1 Principles	4
	2.2 Governance	5
3.	Bitcoin Suisse Global Crypto Taxonomy	8
	3.1 Overview	8
	3.2 Definitions and criteria	10
	3.3 Cryptocurrency (0100)	10
	3.4 General purpose smart-contract platform (0200)	11
	3.5 Decentralized Finance (0300)	11
	3.6 Utility (0400)	13
	3.7 Culture (0500)	15
	3.8 Tokenized Asset (0600)	16
4.	Reference Classification List	18
5.	Change Log	19
6.	Glossary	20

1. Introduction

The crypto industry is young and dynamic, with new digital assets appearing and disappearing on a weekly basis. In addition, the concept of what a digital asset is and can be is constantly evolving as it solely depends on software: algorithms can recreate existing assets known from traditional finance (TradFi) as well as create entirely new conceptions that have not existed, and maybe could never exist, outside the digital, blockchain-powered universe which is the crypto industry.

Therefore, the primary objective of our taxonomy is to make the space more accessible for investors and a larger expert audience by offering a systematic structuring of the crypto industry into sectors and sub sectors. The taxonomy not only streamlines the comparison of individual digital assets but also enhances the evaluation of groups of similar assets. Digital assets exhibit much more inherent variance in design and hence "financial functionality" than stocks or bonds do. Thus, understanding (dis) similarity between assets is crucial for professional digital asset and portfolio management. Investors will value a systematic clustering of similar digital assets to better compare risk-reward profiles.

This document presents the design principles, the taxonomy including all definitions, key information about the governance around taxonomy updates, and finally a glossary.

This work is licensed under a *Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.* Commercial licensing is also available, e.g., to build products and services that make use of the Global Crypto Taxonomy (GCT) and/or the Reference Classification List (RCL). If you are interested, please contact the GCT Board at:

cryptotaxonomy-board@bitcoinsuisse.com

2. Design

2.1. Principles

A *taxonomy* is a scheme for hierarchical classification of objects into groups of similar types. Several economic taxonomies are in use to classify economic activity: the North American Industry Classification System (NAICS, 1997) used in North America, the Global Industry Classification Standard (GICS, 1999) by MSCI and S&P, the Industry Classification Benchmark (ICB, 2005) by DJ and FTSE, etc. While these systems are based on decade-long experiences in traditional industries and financial instruments, one can talk about a "crypto industry" at most since 2009, a mere 14 years. The emerging crypto industry is awash with experimentation and innovation, a dynamic environment that produces design failures and successes. Although the space is still in early stages compared to TradFi, it is necessary to bring more The GCT board is a multi-disciplinary team of in-house systematic structure into the space to help investors, policy makers, and media to embrace and navigate it with confidence. The Bitcoin Suisse Global Crypto Taxonomy (GCT) is our contribution to do just that.

To reach a consistent logic for clustering digital assets, two main design principles are guiding the taxonomy:

- 1. Protocols, not institutions. The taxonomy focuses on cryptographic protocols that implement digital assets rather than companies or other types of institutions that engage in the crypto industry. Why? The core tenet of "crypto" is decentralization and thus disintermediation. Thus, we are not focusing on the crypto industry: even if some protocols have founding teams, sales, marketing, etc. these factors do not enter the definitions for sectors and sub sectors.
- 2. Primary protocol purpose. The purpose of the prove the accuracy and quality of the GCT. protocol takes precedence over the economic function or technical implementation of the digital asset. We refer to functions ("Uniswap is an exchange") rather than technologies ("Uniswap uses ERC-20 governance tokens"). Taxonomy attributes define the way a protocol is perceived, used, and analyzed as a financial asset.

2.2. Governance

The Bitcoin Suisse Global Crypto Taxonomy (GCT) and the Bitcoin Suisse Reference Classification List (RCL) are periodically revised and published on a bi-annual basis by Bitcoin Suisse Research. Their maintenance is governed by the Bitcoin Suisse Global Crypto Taxonomy Board (GCT Board).

The GCT Board consists of employees of Bitcoin Suisse. The GCT Board makes decisions concerning the setup of the taxonomy solely based on the design principles and rules described in this document. For example, the universe of digital assets offered by Bitcoin Suisse AG does not affect the content or composition of the GCT and the RCL.

experts at Bitcoin Suisse:

- Head of Research and its deputy.
- Head Invest & Advice and its deputy.
- Product Owner Crypto Stack and its deputy.

The GCT Board operates independently, ensuring that decisions and recommendations are made without undue influence from external parties or vested interests. It carries out its analyses based on publicly available data and information and makes decisions to the best of its knowledge and belief. The GCT Board can consult additional experts inside and outside of Bitcoin Suisse (e.g., academic researchers or industry professionals with crypto expertise) for help in resolving border cases and/ or major modifications to the GCT. The crypto investment community can also report mistakes and challenge classifications by submitting correction data that helps to im-

The GCT Board is the maintainer/owner of the governance process. The governance process ensures that the taxonomy stays relevant and accommodating to the ever-evolving crypto industry by adding/removing or splitting/merging (sub) sectors.

The bi-annual release cycle is depicted in the following table.

Date	Global Crypto Taxonomy (GCT)	Reference Classification List (RCL)
January 1st	Release with version number	H1 Release, referencing GCT version used
July 1st	Release with version number	H2 Release, referencing GCT version used

The GCT release cycle provides two releases per calendar year, January and July, to accommodate the traditional cycles of product issuance and rebalancing by financial institutions.

To make GCT changes transparent and clear, a versioning scheme based on semantic versioning is applied. Given a version number MAJOR.MINOR.PATCH, we increment the:

- MAJOR version when non-backwards compatible changes are made, e.g., removing a sector or sub sector.
- MINOR version when backwards-compatible changes are made, e.g., renaming, adding, or merging sectors or sub sectors.
- PATCH version when bugs are fixed, e.g., typos in names or similar.

Under normal circumstances, we expect mostly MI-NOR releases. A MAJOR release is only warranted if the change is profoundly altering the taxonomy in a non-backwards-compatible way. Finally, PATCH releases do not alter the taxonomy, but are meant for typos, sharpening definitions, etc.

Pure (re-)classification of digital assets in the GCT, which doesn't necessitate changes to the taxonomy, doesn't alter the version number. While a "patch release" doesn't change the taxonomy, both "major release" and "minor release" do, as previously described.

The RCL is a list of digital assets classified according to the GCT and published by Bitcoin Suisse. The RCL release cycle follows the GCT cycle. A RCL release indicates which version of the GCT was used for classifications and individual assets show when they were classified.

The Release Notes section at the end tracks changes made to this document.

Finally, the crypto investment community is provided with a mailing list to submit feedback and to stay up to date on the development of the GCT/RCL. You can subscribe at *www.bitcoinsuisse.com/crypto-taxonomy.*

3. Bitcoin Suisse Global Crypto Taxonomy

3.1. Overview

The Bitcoin Suisse Global Crypto Taxonomy (GCT) aims This section presents definitions for all sectors and sub to accommodate all kinds of digital assets that make sectors plus a short list of criteria for inclusion and excluuse of blockchain-based, decentralized protocols. It is a sion. Given the early stage of crypto, we do expect the 2-tier taxonomy designed to comprehensively catego- GCT to be changing more often and more substantially rize all existing digital assets while being extendible in than traditional taxonomies. As digital assets and protothe future. It shall provide a "home" for each digital asset cols evolve, sub sectors, and even sectors, may undergo - current or future.

The top tier defines and captures sectors. Digital assets will amass many assets, it may be necessary to add a inside a sector share similar and comparable attributes, third tier to the GCT in the future to provide an additional while digital assets in different sectors differ in their attri- level of differentiation. butes reducing comparability. In other words, one sector should be clearly distinguishable from another whereas digital assets inside the same sector should have defining attributes in common. Similarly, this principle applies to the sub-sectors, a level below. At launch, the GCT consists of 6 sectors and 25 sub sectors (cf. Table 1). It is important to note that the GCT produces cryptoeconomic and not legal classifications. It does not make any statements on the legal classification of tokens and its definitions and criteria do not consider legal aspects.

3.2. Definition and criteria

further division and/or refinement. If the growth of the crypto industry will be so strong that many sub sectors

Sector	Sub Sector
0100 Cryptocurrency	0101 Payment coin 0102 Privacy coin
0200 General Purpose Smart Contract Platform	0201 Layer 1 0202 Layer 2
0300 Decentralized Finance	0301 Exchange 0302 Derivative 0303 Credit 0304 Asset management 0305 Prediction market 0306 Insurance 0307 Liquid staking 0308 RWA finance
0400 Utility	0401 Network 0402 Data 0403 Compute 0404 Certification 0405 Interoperability 0406 Governance 0407 Business Services
0500 Culture	0501 Media 0502 Collectible 0503 Metaverse 0504 Gaming 0505 Social 0505 Memes
0600 Tokenized Asset	0601 Stablecoin 0602 Real-World Asset 0505 Other tokenized Asset

3.3. Definition and criteria

The "Cryptocurrency" sector contains digital assets with the primary purpose of being a form of cryptographically secured digital money. They may differ in monetary policies, level of privacy, relation to fiat currencies, etc. As protocols evolve, some may offer additional functionality 'beyond money', which will require a reassessment of their classification.

Payment coin (0101). A currency asset that offers money-like characteristics of medium of exchange, store of value, and unit of account – but nothing else.

Inclusion	Exclusion
 Transparent sender/receiver addresses Transparent transaction amount 	 Pegged to a fiat currency Sender/receiver obfuscated Transaction amount obfuscated

Privacy coin (0102). A currency asset that offers privacy-preserving attributes in addition such as obfuscating sender/receiver addresses or transaction amounts, etc.

Inclusion	Exclusion
 Sender or receiver address obfuscated 	Sender and receiver address visible
 Transaction amount obfus- cated 	 Transaction amount visible Pegged to a fiat currency

3.4. General purpose smart-contract platform (0200)

The "general purpose smart-contract platform" sector contains digital assets that enable general purpose functionality, usually expressed in the form of decentralized applications consisting of smart contracts and oracles (as external data sources).

Layer 1 (0201). A general purpose smart-contract platform that has an inherent source of cryptoeconomic security and thus does not rely on an external security source.

Inclusion	Exclusion
 Base layer blockchain with a native token 	 No smart contract functionality No base layer blockchain

Layer 2 (0202). A general purpose smart-contract platform that depends technically on another Layer 1 and inherits fully or partially its cryptoeconomic security (e.g., rollups, side chains, etc.). It can but does not have to feature its own native asset.

Inclusion	Exclusion
 Technical dependence on another Layer Cryptoeconomic security inheritance 	 No smart contract functionality Layer 1 protocol

3.5. Decentralized Finance (0300)

The "Decentralized Finance (DeFi)" sector contains digital assets powering smart-contract-based protocols that may operate on their own or on top of another blockchain. These protocols may recreate existing (e.g., exchanges, loans) or create new financial instruments (e.g., prediction markets).

Exchange (0301). A DeFi protocol that allows the trading of token pairs across one or more protocols using an automated-market maker (with single or multi-token pools) or an order book.

Inclusion	Exclusion
 Uses an automated mar- ket-maker or order book 	 No token-pair trading

Derivative (0302). A DeFi protocol that creates tokens whose performance is based on the performance of another, underlying digital asset.

Inclusion	Exclusion
 Uses an underlying digital asset Applies a financial contract (e.g., option, future, swap) 	No underlying digital asset involve

Credit (0303). A DeFi protocol that allows users to borrow or lend tokens that are backed by locked-up tokens serving as collateral.

Inclusion	Exclusion
Locking mechanismYield mechanism	Not possible to deposit col- lateral

Asset Management (0304). A DeFi protocol that enables portfolio management activities such as asset allocation, weighting, etc. to build structured products, indices, or strategies based on digital assets on-chain.

Inclusion	Exclusion
 Enables on-chain structured products, (tracker) indices, or portfolio strategies based on digital assets 	 No possibility to create struc- tured products, indices, or portfolios

Prediction Market (0305). A DeFi protocol that implements a prediction market by allowing users to collaboratively bet on predictions for events.

Inclusion	Exclusion
 Enables betting on an out- come Uses a data oracle 	 No prediction-betting (only gambling)

Insurance (0306). A DeFi protocol that will pay out an insurance sum when a condition is met.

Inclusion	Exclusion
 Allows to define a pay-out condition Uses a data oracle 	 No conditional payout mech- anism No oracle functionality

Liquid Staking (0307). A DeFi protocol that, in exchange for a staked token, issues a receipt token, which is an equivalent 'liquid' token that can be used elsewhere during the staking period (c.f. 60x). This also includes liquid restaking protocols.

Inclusion	Exclusion
 Accepts a staked or restaked token Issues a new, "liquid token" in return 	 Does not offer a liquid token Does not accept a staked or restaked token

RWA Finance (0308). A DeFi asset linked to a protocol that issues or utilizes tokenized real-world off-chain assets. Utilities of the protocol asset can include governance, economic incentives such as discounts or interest, or access to services.

Inclusion	Exclusion
 Protocol issues or utilizes a tokenized off-chain asset 	 Protocol is not related to a tokenized off-chain asset Asset does represent a tokenized version of an asset

3.6. Utility (0400)

The Utility sector contains digital assets that enable access to or represent a resource . The resource does not have to be digital.

Network (0401). A utility asset whose underlying resource is a network for data acquisition (e.g., decentralized sensor networks) and/or communication (e.g., mobile networks, geospatial networks, Internet of Things).

Inclusion	Exclusion
 Represents or enables access	 Does not represent or enable
to network connectivity	access to a resource

Data (0402). A utility asset whose underlying resource is data (e.g., storage, oracles).

Inclusion	Exclusion
 Represents or enables access	Does not represent or enable
to a data resource	access to a resource

Compute (0403). A utility asset whose underlying resource is raw computing power or specialized models (e.g. Al inference models, distributed computing models, coprocessors).

Inclusion	Exclusion
 Represents or enables access	 Does not represent or enable
to computing resource	access to a resource

Certification (0404). A utility asset that certifies a circumstance (around e.g., identity, provenance, ownership, etc.) digitally.

Inclusion	Exclusion
 Represents or enables access	 Does not represent or enable
to a certificate Provides a 'proof' mechanism Uses an external data oracle	access to a resource no certificate issuance

Interoperability (0405). A utility asset whose underlying resource is connectivity between different networks (e.g. inter-chain communication protocols, bridges).

Inclusion	Exclusion
 Represents or enables	Does not represent or enable
inter-network communication	access to a resource

Governance (0406). A utility asset that allows holders to coordinate in decision-making, usually but not limited to protocol governance.

Inclusion	Exclusion
 Gives access to a commodity Services the extraction, storage, tracking or distribution of the commodity 	 Does not represent or enable access to a resource

Business Services (0407). A utility asset that is issued and controlled by an entity with the purpose of giving access to business services.

Inclusion	Exclusion
 Asset gives access to business services 	No access to business services

3.7. Culture (0500)

The Culture sector contains digital assets that represent cultural assets – as opposed to utility assets. The protocol purpose dominates; the asset functionality (e.g., non-fungible or fungible) is immaterial.

Media (0501). A culture protocol that enables production and/or distribution of media content.

Inclusion	Exclusion
 Enables media produc-tion	 Does not represent a
and/or distribution	cultural work

Collectible (0502). A culture protocol that manages collectibles or pieces of art, digital or physical.

Inclusion	Exclusion
 Represents collectible, NFT or art piece Uses non-fungible digital assets 	 Does not represent a cultural work

Metaverse (0503). A culture protocol that manages assets in a virtual world (e.g., weapons, land, etc.) that can be traded.

Inclusion	Exclusion
 Represents a tradable virtu-	 Represents GameFi asset or
al-world asset	collectible

Gaming (0504). A culture protocol that manages Game-Fi assets inside a game, e.g., in-game currency or fungible and non-fungible in-game items.

Inclusion	Exclusion
Represents an in-game cur-	 Does not represent a GameFi
rency or asset	asset

Social (0505). A culture asset that aims to foster decentralized social networks or messaging services. These usually allow creators to control their data, earn rewards for engagement, tokenize their social reputation and own their social graph. Digital identities are usually user owned and -governed. User interactions can usually be monetized.

Inclusion	Exclusion
 Represents an asset linked to a decentralized social network or messaging protocol 	 Does not represent a Social asset

Meme (0506). A culture asset that centers around a meme or a popular cultural movement and often is of a volatile and speculative nature. "Meme coins" are usually created for fun and are more driven by social media trends and community sentiment than financial fundamentals.

Inclusion	Exclusion
 The primary purpose is to signal	The protocol shows technical
sympathy with the meme	innovation

3.8. Tokenized Asset (0600)

A tokenized asset is a digital representation of another asset. Tokenized assets may act as digital certificates of ownership, enabling fractional ownership, increased liquidity, or efficient trading.

Stablecoin (0601). A tokenized asset whose valuation is pegged to a fiat currency such as USD or EUR and that is independent of the collateral or the stability mechanism. They can be fiat- or crypto-collateralized or use an algorithmic stabilization mechanism.

Inclusion	Exclusion
Pegged to a fiat currency	No peg to a fiat currency

Real-World Asset (0602). A tokenized asset representing a real-world off-chain asset. This can include physical assets (real estate, artwork, commodities), intangible assets (intellectual property, carbon credits), or financial instruments (securities, loans).

Inclusion	Exclusion
 Represents a tokenized version	 Represents a purely on-chain or
of a clearly identifiable, real-world	derivative instrument unrelated
asset with proven ownership and	to any underlying real-world
legal documentation	asset

Other tokenized Asset (0603). Receipt tokens of underlying native, staked, restaked, or liquidity pool assets. They function as claims or «receipts» for deposited assets, offering various benefits such as increased utility, efficient management, yield generation, or liquidity. They are usually pegged to the underlying asset with few exceptions such as non-rebasing liquid staking tokens.

Inclusion	Exclusion
 Must represent a specific, identifiable underlying native token, staked token, or a share in a liquidity pool. Issuance process must be transparent and verifiable 	 Do not represent a specific, identifiable underlying native token, staked token, or a share in a liquidity pool.

4. Classification List

The GCT Board maintains a list of classified digital assets for reference. The Reference Classification List (RCL) can be downloaded from

www.bitcoinsuisse.com/crypto-taxonomy.

Important note:

The Reference Classification List provided is purely for research purposes. Based solely on the definitions and inclusion/exclusion criteria of the GCT, it does not consider legal and regulatory aspects. Thus, the RCL does not represent, nor is it intended to serve as, regulatory guidance or advice. Users and stakeholders should consult relevant regulatory bodies or legal counsel for official classifications and compliance requirements.

5. Version history, Change log

Date	Relase type	Version	Comments
01.04.2023	Major	1.0.0	First public release
01.04.2023	RCL	2023Q3	Updated Reference Classification List
01.10.2023	Patch	1.0.1	Adjusted release timeline, clarified language in introductory chapters,
01.02.2024	Minor	1.1.0	Updated several sub sector definitions to better reflect market developments.

6. Glossary

Automated market maker

A type of decentralized cryptocurrency exchange that utilizes digital asset pools to enable trading without order books.

Coin

Term for the native asset of a Layer-1 blockchain, whose functionality is limited to solely functional transaction purposes. A coin is akin to a physical coin changing hands, as a peer-to-peer payment. A coin is to be separated from a token which has additional innate, programmed, functionality.

Cryptoeconomic Security

The underlying security infrastructure of a blockchain, provided either by proof-of-work, proof-of-stake or another security mechanism.

Digital Assets

Umbrella term for coins (native to a blockchain) and tokens (smart contracts).

Fungible

Ability of a digital asset to be readily interchanged for another of like kind.

Layer 0

A Layer 0 is a blockchain layer that interconnects two or more Layer 1 blockchains enabling full interoperability between them.

Layer 1

A base blockchain network that processes and finalizes transactions on its own blockchain with a native token. A Layer 1 has an inherent source of cryptoeconomic security and does not rely on an external security source.

Layer 2

A blockchain layer that is separate from Layer 1 but relies fully or partially on a Layer 1's inherited cryptoeconomic security.

Liquid token

A crypto token given to users who loan their crypto to a liquidity pool, representing a user's share of the pool, enabling redemption for the original tokens invested.

Locking mechanism

A mechanism to lock digital assets used as collateral.

Non-fungible

Inability of a digital asset to be readily interchanged for another of like kind.

(Cryptographic) Protocol

Set of rules to allow entities to transmit information using cryptographic methods such as key exchange, encryption, hashing, etc.

Sector

A cluster in an ecosystem whose items/elements share the same or related characteristics. Within each sector there may exist several, more granular sub sectors with differentiable features.

Smart contract

A program that runs when predetermined conditions are met.

Sub Sector

A sub cluster to a specific sector. A digital asset in a sub-sector is always also a member of the main sector.

Taxonomy

A comprehensive framework that enables systematic identification, clustering, and classification of blockchains, protocols, and their designs.

Token

Term for an asset, whose functional features are only limited by its implementation and therefore expand beyond a simple Coin which is limited to simple peer-topeer transactions. Usually, it is residing in a smart contract on top of a blockchain, being used for transactional purposes, rewards and staking participations, purchasing computation power, building decentralized applications and smart contracts.

Tokenized assets

Digital representation of another asset.

TradFi

A shorthand form used by the crypto community to denote "traditional finance." While the term is not precisely defined, it is used in the context of this taxonomy to denote financial instruments predating the crypto era.



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