



Bitcoin Suisse

Bitcoin Suisse Global Crypto Taxonomy

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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)	12
3.6	Utility (0400)	14
3.7	Culture (0500)	15
3.8	Tokenized Asset (0600)	16
4	Reference Classification List	17
5	Change history	18
6	Glossary	19

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.

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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 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 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.

The GCT board is a multi-disciplinary team of in-house 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 improve the accuracy and quality of the GCT.

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.

Table 1 Bi-annual release cycle

Date	Global Crypto Taxonomy (GCT)	Reference Classification List (RCL)
January 1 st	Release with version number	H1 Release, referencing GCT version used
July 1 st	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 MINOR 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 document end tracks changes made to this document.

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.

3 Bitcoin Suisse Global Crypto Taxonomy

3.1 Overview

The Bitcoin Suisse Global Crypto Taxonomy (GCT) aims to accommodate all kinds of digital assets that make use of blockchain-based, decentralized protocols. It is a 2-tier taxonomy designed to comprehensively categorize all existing digital assets while being extendible in the future. It shall provide a “home” for each digital asset – current or future.

The top tier defines and captures sectors. Digital assets inside a sector share similar and comparable attributes, while digital assets in different sectors differ in their attributes 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.

Table 2 Bitcoin Suisse Global Crypto Taxonomy (version 1.0.1)

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
	0506 Meme
0600 Tokenized Asset	
	0601 Stablecoin
	0602 Real-World Asset
	0603 Other tokenized Asset

3.2 Definitions and criteria

This section presents definitions for all sectors and sub sectors plus a short list of criteria for inclusion and exclusion. Given the early stage of crypto, we do expect the GCT to be

changing more often and more substantially than traditional taxonomies. As digital assets and protocols evolve, sub sectors, and even sectors, may undergo further division and/or refinement. If the growth of the crypto industry will be so strong that many sub sectors will amass many assets, it may be necessary to add a third tier to the GCT in the future to provide an additional level of differentiation.

3.3 Cryptocurrency (0100)

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. . Transaction amount obfuscated.	. Sender and receiver address visible. . 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 protocol with a native coin	. . No base layer protocol

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 market-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.	. No underlying digital asset involved

. Applies a financial contract (e.g., option, future, swap)	
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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 mechanism . Yield mechanism	. Not possible to deposit collateral

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 structured 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 outcome. . 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 mechanism . 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.
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RWA Finance (0308). TBD

Inclusion	Exclusion
. TBD	. TBD

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 to network connectivity	. Does not represent or enable access to a resource

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

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

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

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

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

Inclusion	Exclusion
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. Represents or enables access to a certificate. . Provides a 'proof' mechanism. . Uses an external data oracle	. Does not represent or enable access to a resource. . no certificate issuance
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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 inter-network communication	. Does not represent or enable 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
. Enables collective decision-making by voting or other coordination mechanism	. Does not enable access to governance

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 production and/or distribution	. Does not represent a 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 asset	. 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 virtual-world asset	. Represents GameFi asset or collectible

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

Inclusion	Exclusion
. Represents an in-game currency or asset	. Does not represent a GameFi 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 sympathy with the meme.	. The protocol shows technical innovation.

3.8 Tokenized Asset (0600)

The 'Tokenized Asset' sector contains protocols to manage tokenized versions of any kind of on- and off-chain asset or instruments of traditional finance (TradFi).

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

Inclusion	Exclusion
. Pegged to a fiat currency- . No obfuscation	. No peg to a fiat currency

Real-World Assets (0602). TBD

Inclusion	Exclusion
.	.

Other tokenized Asset (0603). TBD

Inclusion	Exclusion
.	.

4 Reference 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.digital asset

5 Change Log

Date	Release type	Version	Comments
01.04.2023	Major	1.0.0	First public release
01.10.2023	Patch	1.0.1	Adjusted release timeline, clarified language in introductory chapters.
01.10.2023	RCL	2023Q3	Updated Reference Classification List
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 coin. 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-to-peer 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

Real world assets, tangible, or intangible, that are represented on blockchains.

TradFi

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

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