Upbit Index Laboratory

Digital Asset Classification & Evaluation Structure

version 1.1

The Upbit Index Laboratory Digital Asset Classification & Evaluation Structure is a framework that is designed to classify and evaluate all digital assets listed on Upbit Exchange. The evaluation structure has been designed to evaluate the peculiar properties of each digital asset in terms of several aspects, and it serves as a tool to classify listed assets.

This structure has been designed to reflect the elements subject to evaluation and review under the Policy for Supporting Digital Asset Transactions, which is a criterion for evaluating newly listed digital assets. It is also used as a basic reference material for providing information on listed digital assets and evaluating digital assets for forming theme /strategic indexes. This structure consists of five upper categories to classify and evaluate the core properties of listed digital assets and is further broken down to mid-level and lower categories to define and evaluate details.

This structure covers the digital assets listed on Upbit Exchange and, if necessary, includes other digital assets not listed on the Exchange. This structure is formulated under the premise that it will continue to be revised and supplemented, taking into account the development of the market, realization of demand, and changes in the market situation.

UPBIT Index Laboratory Digital Asset Classification & Evaluation Structure

Hierarchy	Classification and Evaluation Criteria	Explanation
1.0	Purposes of digital assets	The core values and purposes of digital assets must be consistent with Upbit's policy for supporting transactions and philosophy. Criteria will be established for determining the extent of innovation and technological advance of digital assets. New demands and useful places that accept digital assets must also be discovered to fulfill their purpose. Lastly, work needs to be done to decide how the primary values of certain digital assets can be classified and categorized.

1.1	**Electronic currency**	This is P2P based-online digital asset using blockchain technology represented by Bitcoin. It allows participants to conduct transactions using distributed database technology and can be used as a means of payment, for fund transfers, and for an exchange of value.
	Electronic currency	Digital assets allow for unlimited transactions between blockchain users, thus serving as electronic currency.
	Technological advances and innovations	Technological advances and innovations aim to overcome technological limits of existing Bitcoin. There is demand for advances in the capacity for dealing with transactions and creation periods.
	Privacy	Technology will complement the limits posed by the anonymity that comes from the transparency of transaction details that existing blockchains have. The anonymity and security of transactions will also be enhanced.
	Distributed governance	To avoid the impacts of large players within blockchain networks, all participants will be provided with innovative elements to realize equal opportunities.
1.2	**Platform**	Digital assets support technological platforms and ecosystems to achieve certain purposes. Digital assets can support the creation of a blockchain ecosystem using tools, such as smart contracts, or provide a platform service using blockchains in certain existing fields.
	Blockchain platform	Digital assets support the development of other decentralized applications (Dapp) or private blockchains or establishment of ecosystems. The development and operation of other blockchains can be facilitated by executing smart contracts, supporting development environments, and building ecosystems.
	Authentication service	The trend is moving away from the centralized systems-based authentication method, and it is moving toward providing blockchain-based authentication technology and solutions.
	Prediction market	This market involves betting and making predictions on events that are likely to occur in the future.

	Decentralized exchange	The trend is moving away from centralized systems-based exchanges to a blockchain-based decentralized platform for transactions.
	Kickstarter	Kickstarter is used to provide verification tools for supporting initial coin offerings (ICO) of new digital assets, or for participating in funding and acceleration.
1.3	**Fintech**	Digital assets aim to replace the functions carried out by existing financial systems with those to be carried out by IT and blockchain technology.
	Funds transfer service	Digital asset services replace funds settlement and transfer solutions between existing banks or settlement systems between financial institutions.
	Settlement Solutions	These solutions assist in the offline use of Bitcoin or other online assets.
	Value preservation	This involves pegging digital assets with other types of assets for the preservation of value.
	P2P credit service	Loan and credit services are provided using blockchain technology.
1.4	**Shared economy**	Digital assets support a service of providing idle resources via cloud technology by using the resources of network participants.
	Storage rental	Storage service can be provided by using idle storage space.
	Computing power rental	This service makes use of unused computing power (CPU, GPU).
1.5	**Social platforms**	Digital assets provide a social networking service for network participants or a service that is linked to existing social networking services.
	Social networking	Social network services support messaging platforms, blogging, and matching pools.
	SNS Content	Services recommend social network-based content, support content creators, or provide distribution media.
1.6	**Culture, Entertainment**	Digital assets provide services related to existing cultural and entertainment industries.
	Advertisement Industry	These services are related to the traditional advertisement industry and Internet advertisements.
	Gaming Industry	There are services are related to the gaming industry, exchange of values within/between games, or the establishment of ecosystems.

	Casino Industry	This involves fields related to casinos and the gambling industry.
2.0	**Digital Asset market**	This involves properties which are obtained from evaluated values, pricing, and transaction data of digital assets in the digital asset market, including Upbit.
2.1	**Upbit market**	The Upbit market's prices are determined from transactions of pertinent assets, the properties of data related to the prices, and comparative values (percentile).
	Price	This is the price of a one-unit digital asset and the comparative percentile of the price within the market.
	Market capitalization	This is the market capitalization of a digital asset and the comparative percentile of the market capitalization within the market.
	Transaction amount	This is the transaction amount of a digital asset and the comparative percentile of the transaction amount within the market.
	Return rate	This is the return rate of a digital asset during a period and the comparative percentile of the return rate within the market.
	Volatility	This is the volatility of a digital asset during a period and the comparative percentile of the volatility within the market.
	Currency pair	This refers to currency pairs of digital assets which are traded on Upbit.
2.2	**Global markets**	These involve properties related to global exchanges where digital assets are traded.
	Number of exchanges supporting a certain amount of digital asset transactions	This is the number of exchanges which support certain amounts of digital asset transactions.
	Currency pair	This refers to the types of currency pairs which are traded on global exchanges.
	Transaction amount	This is the amount of digital assets traded on the global market.
	Distribution of transaction amount	This is the distribution and degree of concentration of transaction amounts of digital assets.

3.0	**Characteristics of blockchain networks**	These are the properties related to digital asset networks, a creation of new blocks, properties of networks, and properties related to the creation and distribution of blockchains.
3.1	**Creation of new blocks**	This involves properties related to the creation of new blocks, such as the consensus algorithm to engage in the creation of new blocks (mining), the amounts of digital assets issued, and caps on the amounts.
	Hashing algorithm	This refers to the types of algorithms for engaging in the creation of new blocks, such as POW/POS/DPoS/LPoS.
	Block time	This is the period until new blocks are created.
	Whether mining is possible	This refers to whether digital assets can be mined.
	Mining limit	This refers to whether there are limits on mining and mining limits, if any.
3.2	**Blockchain networks**	These involve properties related to the processing capacity of blockchain networks being operated, as well as properties related to the distribution of digital assets.
	Protocol	This refers to the basic protocols of networks, such as BTC-based protocol, or ERC-20 support.
	Main-net	This refers to whether independent main-nets are operated.
	Number of transactions	This is the total number of transactions processed through networks.
	Capacity for processing transactions	This is the blockchain networks' capacity for processing transactions as indicated in transactions per second (TPS).
	Token	This refers whether it can be independently operated without the help of other blockchain networks.
	Transaction fees	This is the proportion of fees needed for processing transactions and the range of fluctuations.
	Local number of nodes	This refers to the local distribution of nodes.
	Number of nodes	This is the number of activated nodes.
	Explorer	This means a blockchain explorer.
	Fork	This refers to records on forks of pertinent chains and future plans, in contrast to original chains.
	Airdrops and distribution methods	This refers to whether digital assets have been distributed via airdrops or other distribution methods.

4.0	**Developer and community**	This involves properties related to the ecosystem which consists of the development team and community of a pertinent digital asset and actual places that accept the pertinent digital asset.
4.1	**Development team**	This involves properties related to the developer of a digital asset and the partner who makes decisions on the development.
	Issuer	This also involves the technological background and reputation of the issuer.
	Roadmap	This is the blueprint proposed by the developer of the digital asset and also refers to whether the blueprint has been achieved.
	Activities	This refers to whether the development of a digital asset is active, which is observed from the properties showing the extent of progress in development, such as GitHub activities.
	Whitepaper	The is the whitepaper for a pertinent digital asset.
	Outlets	This refers to formal web pages and Twitter accounts.
	Audit	This refers to whether development codes of digital assets are audited, the results of the audits, and the reputation of auditors.
	Core partners	Other than the issuer (development team), this involves the reputation and performance of core partners required by digital assets to achieve their purposes.
4.2	**Community and ecosystem**	This involves properties related to the community using or taking advantage of a pertinent digital asset or the ecosystem created through the digital asset.
	Activities	This refers to whether there is any community that supports a pertinent digital asset or when users exchange their opinions on the development of the digital asset and the extent to which the community is active.
	Places accepting digital assets	This refers to the types and sizes of places actually accepting digital assets, including countries.
	Ecosystems	This involves the size or the extent of activation of total platforms or ecosystems which are operated on or use digital assets.
4.3	**ICO and early distribution**	This involves properties related to digital assets prior to offering on the market, such as the distribution of coins via early ICOs and whether they are pre-mined.

	Distribution structure	This is the distribution structure of digital assets which are disclosed via early ICOs and other means. It also involves the proportions and distribution of the development team, ICO participants, and prior investors.
	Funding and the size of funding	This refers to whether funds are raised or ICOs are conducted in advance for the development of digital assets, as well as the amounts of funds raised.
	Pre-mining	This refers to whether there are pre-minded digital assets prior to the operation of Main-nets, and the number of such digital assets.
	Safekeeping	This refers to the period during which the initial quantity of digital assets is safekept, as well as whether safekept digital assets can be checked.
5.0	**Statutes and ethics**	This refers to whether digital asset-related laws and ethical regulations are observed.
5.1	**Statutes**	This refers to whether relevant laws are complied with, as well as related opinions.
	Shares	This involves whether digital assets can be classified as shares under the Korean Commercial Code and the Securities Transaction Act, and whether newly added properties change the classification results via updates.
	Dividend	This refers to whether any type of interests that can be considered dividends are accrued for the owners of digital assets.
	Compliance with relevant statutes	This refers to whether transactions of digital assets do not violate applicable laws.
	Ethical regulations	This refers to whether digital asset-related transparency and ethical regulations are observed.

Legal notice of UBCI

Dunamu Inc. owns the copyrights and other intellectual property rights to the UBCI index and related data (market price information, tickers, widgets, API and all content related to the foregoing) that are provided by it. It uses these rights for the purpose of providing information for users.

Users may only reproduce, distribute, quote, or display the UBCI Index and related data for non-profit purposes and shall indicate the source with the following:

"UBCI Index"
Copyright 2016 Dunamu Inc. All rights reserved.
Powered by Dunamu/Upbit

If users intend to revise and redistribute UBCI Index and the related data, then they shall obtain prior approval from Dunamu Inc.

Users may not, directly or indirectly, create or distribute swaps, futures, options, or other derivative products that are based on UBCI index or quote the index or financial instruments that rely on contracts, funds, or other joint investment instruments similar to the foregoing without prior written consent from Dunamu Inc.

UBCI Index and related data are provided on an "as they are" basis. Dunamu Inc. does not warrant the quality, accuracy and adequacy of UBCI Index and related data and there is an inevitable possibility of errors, omissions or delays in the information. Dunamu Inc. shall not compensate for any loss or damage caused by transactions or investments using UBCI Index and related data. In

addition, Dunamu Inc. has neither legal obligation to engage in any legal dispute arising from services between users or between users and any third party nor legal liability in connection with the foregoing.

Dunamu Inc. has the right to cancel the permission of the use of UBCI Index and related data and impose separate license fees, depending on the uses of UBCI Index and related data.