The Brooklyn Project

Digital Asset Taxonomy

From the Perspective of Global Frameworks for Securities and Financial Instruments

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Introduction

This proposed taxonomy provides a common set of labels for digital or "crypto" assets, referred to herein as "tokens."[1] The goal is to assign labels based on whether and where a particular type of token fits within existing global regulatory frameworks for securities and financial instruments.

Tokens are entirely digital, programmable instruments that can represent, or facilitate the exchange of or access to, anything—e.g., any digital or real-world asset, or any set of rights, protocols, or rules. This taxonomy contains three top-level categories:

1. **General Payment Tokens:** Tokens whose intrinsic features and primary use are to serve as a general purpose store of value or medium of exchange for generally any goods, services, or assets. The paradigmatic example today is Bitcoin.

2. **Consumer Tokens:** Tokens that are inherently consumptive in nature, because their intrinsic features and primary use are to represent, or provide access to, a limited set of goods, services, and/or content.

3. **Investment Tokens:** Tokens that are inherently designed or substantially marketed as a financial investment.

Each of these categories is explained in more detail below.

Three preliminary notes about terms you will _not_ find in this taxonomy: First, the label "consumer token" is used instead of "utility token" despite the current widespread use of the latter within industry. The rationale behind the use of "consumer token" is explained in the following section, entitled "Prioritizing Consumers of Non-Investment Tokens."

Second, the document does not use "coin," "initial coin offering" or "ICO." These terms are suggestive of similarities to "IPOs," and therefore inaccurate and misleading, because many digital assets (i) do not function like "coins"; and (ii) are more akin to next-generation digital consumer goods or networks, whose sales do not necessarily resemble "IPOs" or implicate laws related to securities or financial instruments.

Third, digital assets are not labeled as "virtual currency," because people could confuse the term "currency" as suggesting that these assets are recognized as general legal tender, which at this time is generally not the case. In fact, many assets commonly referred to as virtual currencies serve only as a coupon or payment instrument for a limited number of goods or services on a specific blockchain-based network (_e.g._, transaction processing and validation).

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[1] This taxonomy uses the term "token" throughout. While the term "token" may mean different things depending on the context — including, in some cases, digital assets created according to specific protocols on the Ethereum blockchain — in this taxonomy, the term refers more generally to any "crypto-assets."

Prioritizing Consumers of Non-Investment Tokens

This taxonomy uses the label "consumer" rather than "utility" to describe tokens that are inherently for consumptive use and therefore less likely to implicate laws related to securities or financial instruments. "Consumer" is more helpful in signaling a distinction from securities or financial instruments — namely, that these tokens are primarily intended not as financial investments but rather for use by consumers, whether individuals or businesses. Indeed, it is commonly understood around the world that laws related to securities and financial instruments typically do not apply to sales of consumer items to consumers.

In addition, far more exciting than a token having some "utility" is its ability to power new networks of consumers that can coordinate economic activity and benefit from "network effects" and shared digital infrastructure without the costs of increased market power and data access by an intermediary.[2] In other words, on these new "consumer networks," online activity and the "network effects" generated by them can be owned not by a few "tech giants" but instead by *consumers* themselves, who can own and control their own data and contributions.

Finally, the term "consumer token" emphasizes that the ultimate success of token-powered networks will depend on consumers —*i.e.*, bona fide users of the token and network.

Proposed Taxonomy Labels

These labels are intended to be the most fundamental, base labels that could apply to a given digital asset. Multiple base labels could apply to a single asset. These labels generally are not mutually exclusive unless otherwise specified.

- **General Payment Tokens:** The intrinsic features and primary use of these assets are to serve as a general purpose store of value or medium of exchange. "General purpose" means that these tokens are intended to serve as a store of value or medium of exchange with respect to *any* goods, services, or assets. This general-purpose focus is similar to the use and purpose of traditional currencies. The most well-known example today of a General Payment Token is Bitcoin.

  While general payment tokens may all have similar types of intrinsic features, they could have important differences, especially in terms of (i) technological characteristics, such as transaction processing procedures and speeds; and (ii) degrees of on-chain anonymity, such as pseudo versus full anonymity.

- **Consumer Tokens:** These tokens are inherently consumptive in nature, which means that their intrinsic features and primary use are to represent, or facilitate the exchange of or access to, a limited set of goods, services, or content. The term "consumer" here refers to the consumptive nature of the relevant goods, services, or content, which businesses as well as individual users may ultimately use or consume.

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[2] *See* Some Simple Economics of the Blockchain, Christian Catalini, Joshua S. Gans, September 21, 2017.

Consumer tokens are designed and intended to be used or consumed in some way, including, for example, for education, work, hobby, or entertainment purposes. A consumer token can function as a highly efficient means to allocate fairly and widely the supply, demand, costs, burdens, and value of digital or digitized resources.

As described above, not only can consumer tokens resemble digital versions of traditional consumer goods, services, and content, but they also can enable the creation of fundamentally new "consumer networks" where online activity and data are owned by consumers themselves.

Most of the current consumer tokens involve one or more of the following types of intrinsic features:

- **Consumer Ownership Rights:** Tokens can themselves be a natively digital consumer good, such as a tokenized collectible like a badge for online gameplay or a unique digital collectible that does not exist in the physical world, such as a virtual pet; or they can represent ownership of an analog (*i.e.*, not digital or on the blockchain) good, such as a traditional baseball card. In both cases, the token can confer ownership in the corresponding good and/or represent the good.

- **Consumer Coupon Rights:** Tokens that provide a partial or complete discount on particular goods, services, or content, in the physical world or in the virtual world—*e.g.*, file storage on a given token-powered network or electricity provided to retail customers.

- **Consumer Activity Rights:** Tokens that involve rights or obligations related to an individual user's activities on a token-powered network. With regard to consumer activity rights, there are at least two current subcategories:

    - <u>Reward</u>: Tokens that serve as a form of reward or payment for performed activities. In the cases of online platforms, the tokens earned can also be used to access features or get benefits on the platform. In the case of physical systems, the tokens may act like "frequent flyer miles" to be redeemed for services or goods.

    - <u>License</u>: Tokens that serve as a license to access or perform certain activities related to an online service. Analogies in the analog world may include a software license, theatre tickets, taxi medallions for New York City taxis, or occupational licensing and certifications for certain vocations. In the virtual world, this could include a token which allows access to a content-driven website. License rights may also include relationships such as a membership to a wholesale club, subscription for premium news and editorials, or the right to participate in a book club of the month.

There are two important limitations to consumer tokens as defined in this document. First, while consumer tokens generally are not "securities" or financial investments, some jurisdictions may classify them as such if the tokens are: (a) designed with intrinsic features that are strictly financial in nature—*e.g.*, a passive right to dividends that is unrelated to any contributions made by the user; or (b) marketed or sold as financial instruments. In particular, in the United States, the SEC may apply the U.S. federal securities laws to initial sales of consumer tokens where, among other things, the tokens are sold to capitalize a business and in a manner that would cause any reasonable buyer to purchase the tokens as a passive financial investment and not a product for consumption or use.[3]

Second, consumer tokens are not primarily designed or used as a general payment instrument. Rather, they confer a right, represent, or facilitate the use or consumption of, a particular set of goods, services, or content—*e.g.*, on or within a particular blockchain or decentralized application.

- **Investment Tokens:** This final category includes digital assets that are (1) financial investments, <u>and</u> (2) classified as a "security" or its equivalent under applicable laws. This classification could vary by jurisdiction.

  There are at least two broad categories of investment tokens:

  ○ **Financial Instruments:** Tokens whose intrinsic characteristics are inherently unique to financial instruments. These intrinsic characteristics include, for example, equity ownership in a company, an interest in a fund, as well as structured debt, loans, and dividend rights.

    ■ Many traditional "financial instrument" products will also be "investment" or "security" assets.

    ■ Note that not all financial instruments are "securities" in every jurisdiction.

      ● For example, under U.S. law, loans may not always qualify as securities, and, similarly, profit interests in a partnership may not always qualify as a security, particularly if each holder of the profit interest equally and substantially/meaningfully participates in governance rights.

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[3] Determining whether the U.S. federal securities laws would apply to any particular token or token sale would involve analysis of additional factors, and that legal arguments may exist to challenge application of the securities laws to the above-described facts. A full analysis of any particular set of facts or legal arguments is beyond the scope of this document.

- In addition, some Investment Tokens can represent financial or commodity derivatives or insurance products that are not classified as securities.

- **Other Investments:** Some jurisdictions may apply securities or financial instrument regulations to tokens whose intrinsic characteristics are not purely those of a financial instrument.

    - For example, as discussed above, in the United States, the SEC could consider a consumer token to be a "security" if, among other things, the token is sold to capitalize a business and in a manner that would cause any reasonable buyer to purchase the tokens as a passive financial investment and not a product for consumption or use.

    - The SEC could approach general payment tokens in the same way— *i.e.*, if their initial sales are marketed and sold substantially as a financial investment or if they are solely viewed as a speculative store of value, the SEC may view those tokens as "securities." Worth noting, however, is that a primary "use" of a general payment token is to hold the token as a store of value.

Some assets may not fit neatly within the above taxonomy. The taxonomy was designed to account for major emerging, contemplated digital asset models and naturally will need to evolve over time to reflect innovation and market activity.

Hypothetical Examples

The following hypotheticals are only for illustrative purposes. An actual legal or regulatory analysis would require an in-depth examination of all relevant facts and circumstances, and the outcome of the analysis could turn on many different factors, including many that are not mentioned in these hypotheticals.

Token Curated Registries
Tokens are used to curate an online registry. These tokens are staked by applicants to apply for, and by challengers to deny, entry of information into a registry (such as best restaurants in a given city).

Details | Labels:
Consumer Token – Consumer Activity Rights - Reward;
Consumer Token – Consumer Activity Rights - License.

Data Marketplace Networks
A network granting users access to data networks, including storage capabilities. Users need "Token A" in order to access the network, and those parties contributing data to the network receive "Token A."

Labels:
Consumer Token – Consumer Activity Rights – Reward;
Consumer Token – Consumer Activity Rights – License.

File Storage Network
A network allowing users to rent file storage from one another. Users need "Token A" in order to access the network, and also pay their "rent" in "Token A."

Labels:
Consumer Token – Consumer Activity Rights – Reward;
Consumer Token – Consumer Activity Rights – License;
Consumer Token – Consumer Coupon Rights.

File Storage Network - Jurisdictional Differences
Same as the File Storage Network example, except that the creators of "Token A" did not design or market "Token A" to appeal primarily to likely users of the token, and instead designed, marketed and promoted "Token A" primarily as a financial investment opportunity in order to raise money from investors who did not intend to use "Token A."

Labels (Singapore):
Consumer Token – Consumer Activity Rights – Reward;
Consumer Token – Consumer Activity Rights – License;
Consumer Token – Consumer Coupon Rights.

Labels (USA, Switzerland):
Investment Token - Other Investments;
Consumer Token – Consumer Activity Rights – Reward;
Consumer Token – Consumer Activity Rights – License;
Consumer Token – Consumer Coupon Rights.