

My thoughts on regulating crypto currencies

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Abstract: Should cryptocurrencies be regulated? If yes, how should they be regulated? These are the questions that this document seeks to answer. I propose that since all cryptocurrencies are NOT actually “currencies”, they must be regulated based on *what they do* and not based on *what they are* (blockchain assets). Note: The figures in this document are approximate and as of 19th November 2021.

Abbreviations used in this document:

- Mcap: *Market capitalization*, which is calculated as the product of the *Current Price* and the *Circulating Supply*.
- TVL: Total Value Locked, which represents the total of all assets deposited in the protocol earning rewards, interest, new coins / tokens, fixed income, etc.
- Vol: *Volume (24h)* is the fiat value of this crypto traded over the last 24 hours.
- VMR: Volume to Market Capitalization Ratio, which is calculated by dividing the Volume by the market capitalization

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1. Background

Money is evolving at an amazing speed. We started off with Intrinsic Money and then moved to Political Money. Today, we also have Corporate Money, Individual Money, Environmental Money, Synthetic Money, Math Money, Diplomatic Money, and Contraband Money. This is explained in a mindmap on the next page.

According to the 2014 FATF report on *Virtual Currencies - Key Definitions and Potential AML/CFT Risks*¹, a cryptocurrency has the following characteristics:

1. It is math-based.
2. It is a decentralised convertible virtual currency.
3. It is protected by cryptography (it incorporates principles of cryptography to implement a distributed, decentralised, secure information economy).
4. It relies on public and private keys to transfer value from one person (individual or entity) to another.
5. It must be cryptographically signed each time it is transferred. The safety, integrity and balance of cryptocurrency ledgers is ensured by a network of mutually distrustful parties who protect the network in exchange for the opportunity to obtain a randomly distributed fee.

This definition relates to what a cryptocurrency “is” – a blockchain asset. This definition made sense in a world with only Bitcoin and a few of its derivatives like Litecoin.

But today we live in a world with 13,000+ cryptos with a market capitalization north of \$2 trillion. DeFi (Decentralized Finance) is an umbrella term for financial applications powered by blockchain technology. Today, there are hundreds of billions locked up in DeFi protocols.

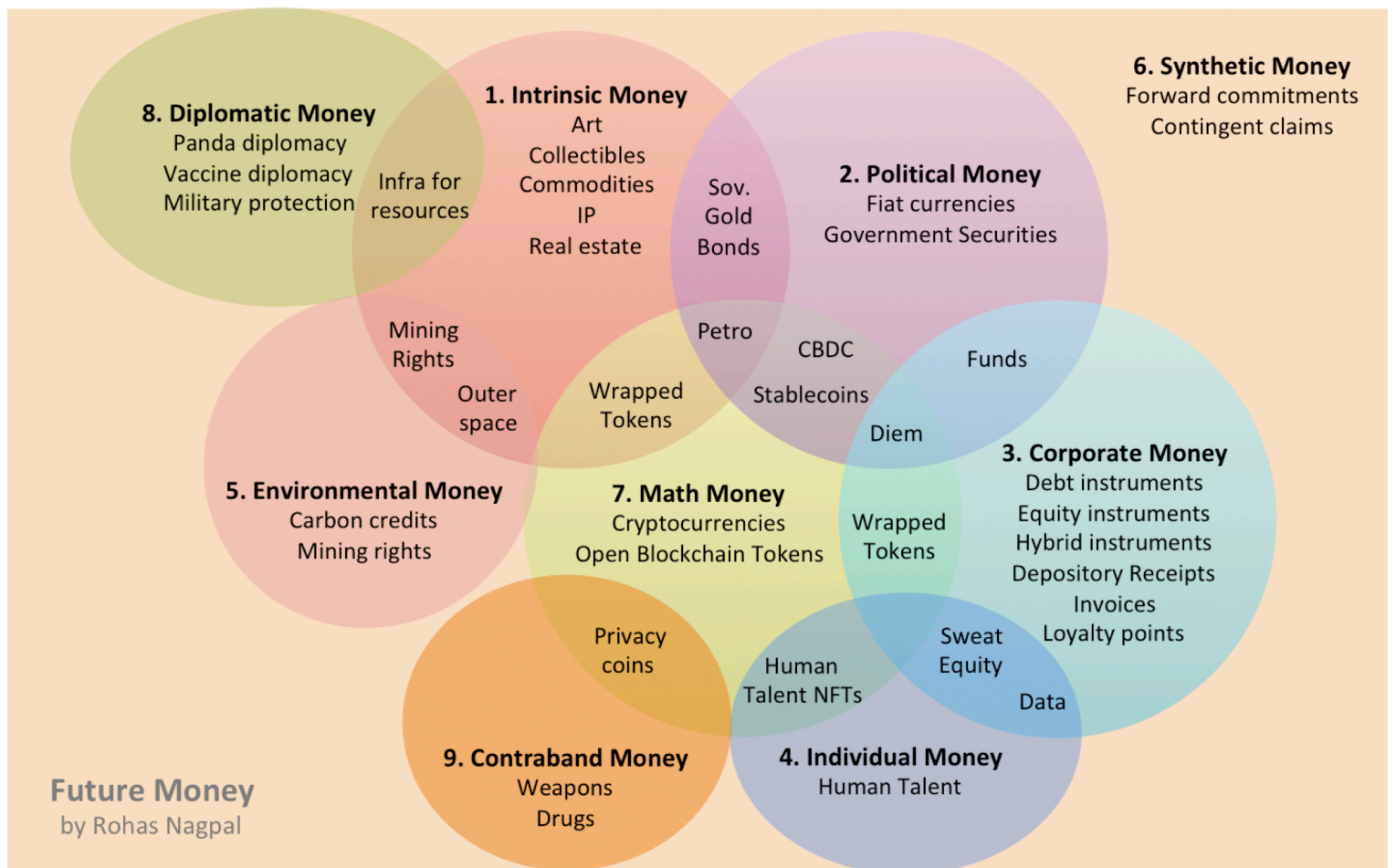
The crypto ecosystem has also grown massively and comprises a wide variety of players. The mind maps in the following pages explain some of these.

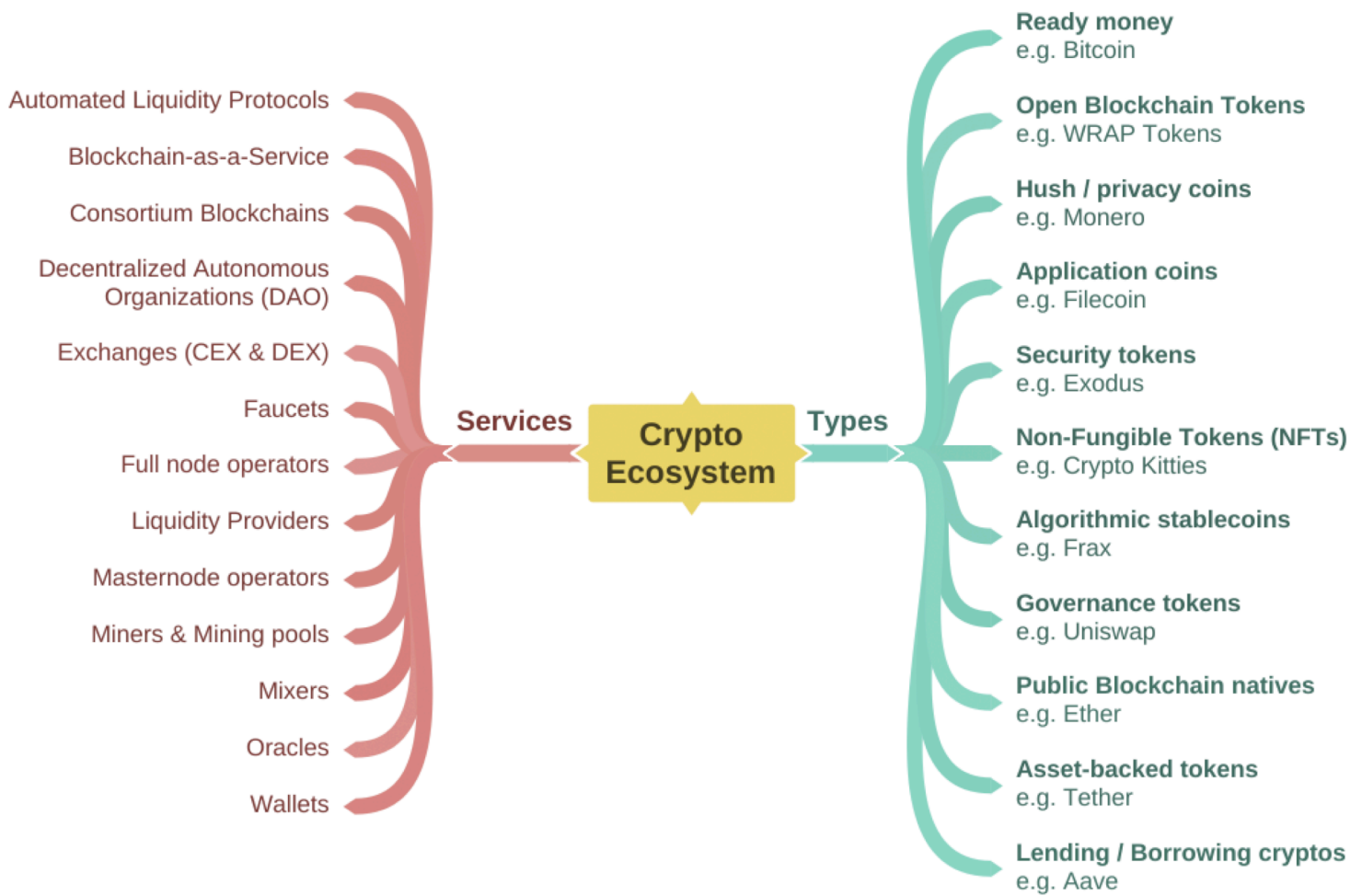
The use of cryptocurrencies in darknet markets, money laundering, ransomware, and terrorism financing is growing. Fraud and theft at decentralised finance platforms is massive and has exceeded \$10.5 billion in 2021².

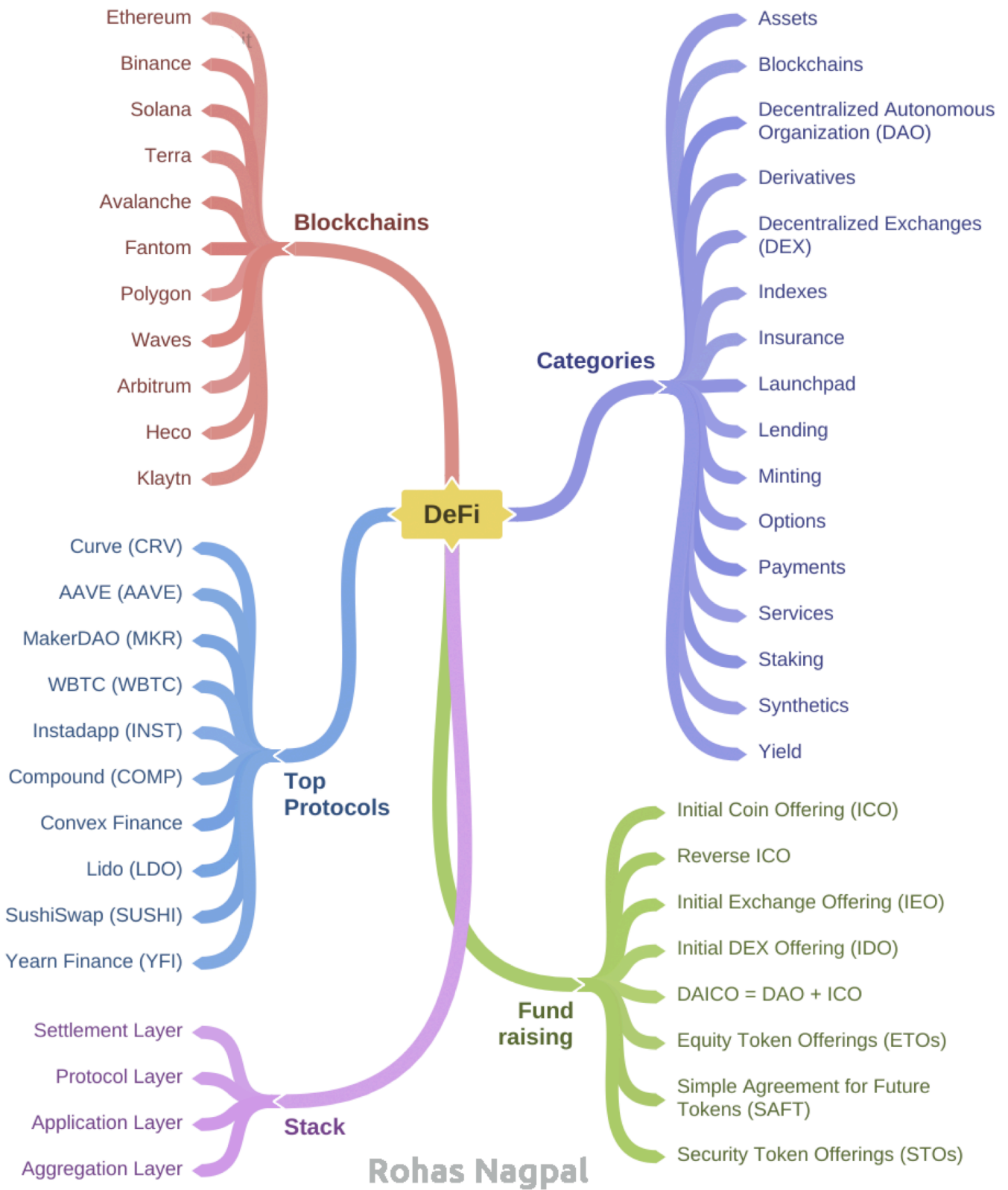
There is no doubt that cryptocurrencies must be regulated. I propose that we define and regulate cryptos based on what they “do” and not based on what they “are”.

¹ See: <https://www.fatf-gafi.org/media/fatf/documents/reports/Virtual-currency-key->

² <https://www.reuters.com/technology/crime-crypto-defi-sites-hits-105-bln-2021-research-shows-2021-11-18/>







2. The 11 types of cryptos

According to me, the 11 types of cryptos are³:

R = Ready money
O = Open Blockchain Tokens
H = Hush coins
A = Application coins
S = Security tokens
N = Non-Fungible Tokens (NFTs)
A = Algorithmic stablecoins
G = Governance tokens
P = Public Blockchain natives
A = Asset-backed tokens
L = Lending / Borrowing cryptos

Note: In this document I have used the words coin, crypto, and token interchangeably.

This is a rough distinction and some cryptos can fall under multiple categories e.g. a fiat-backed stablecoin is ready money and an asset backed token.

R = Ready money

Ready money cryptos are those that can be used to buy and sell products & services or which can be quickly converted to "cash". The world's first cryptocurrency Bitcoin (BTC) is an example of a ready money crypto.

Initially Bitcoin was highly criticized for being favoured by criminals and dark-web platforms like Silk Road. But today Bitcoin has found many legitimate uses and is even legal tender in one country – El Salvador.

Some of the leading ready money cryptos are:

Name	Mcap	Volume	VMR
Bitcoin (BTC)	\$ 1 trillion	\$ 42 billion	0.04
Tether (USDT)	\$ 73 billion	\$ 76 billion	1.33
USD Coin (USDC)	\$ 34 billion	\$ 6.5 billion	0.19
Dogecoin (DOGE)	\$ 30 billion	\$ 1.9 billion	0.06
Shiba Inu (SHIB)	\$ 24.5 billion	\$ 4 billion	0.16
Litecoin (LTC)	\$ 17.8 billion	\$ 3 billion	0.21
Binance USD (BUSD)	\$ 13 billion	\$ 8.7 billion	0.66

³ Bonus points for you if you realized the acronym for these spells my name ☺

O = Open Blockchain Tokens

An Open Blockchain Token (OBT) is a unique form of crypto recognized under the laws of *Wyoming, US*. An OBT must be exchangeable for specified consumptive purposes services e.g. software, content, or real/tangible personal property.

The relevant laws are:

- WS 40-29-101: Financial Technology Sandbox Act (Chapter 29 of Title 40).
- WS 17-16-140: Electronic corporate records (Chapter 16 of Title 17). The list of relevant sections is [here](#).
- WS 39-11-105: Exemptions of virtual currencies from property taxation (Chapter 11 of Title 39). See 39-11-105 (b)(vi)(A).
- WS 34-29-101 through 34-29-105: Digital Assets (Chapter 29 of Title 34) and WS 34-29-106: Wyoming Utility Token Act (Chapter 29 of Title 34)
- For details on corporate stock-certificate tokens, see 17-16-140 (Definitions), 17-16-605 (Construction of terms relating to stock and certificate tokens) and 17-16-625 (Form and content of certificates) - (Chapter 16 of Title 17)

Example: Wrapped Asset Token (WRAP)

H = Hush cryptos

Did you know that most cryptos are not 100% anonymous?

All their transactions can be viewed on publicly available Blockchain Explorers. That's what led to the birth of hush coins or privacy coins - some of which are private by default, while others let the users decide if they want to activate the functionality or not.

Some of the leading privacy cryptos are:

Name	Mcap	Volume	VMR
Monero (XMR)	\$ 4.2 billion	\$ 245 million	0.06
Zcash (ZEC)	\$ 2 billion	\$ 547 million	0.26
Decred (DCR)	\$ 1.45 billion	\$ 12 million	0.01
Secret (SCRT)	\$ 1 billion	\$ 15.8 million	0.01
Horizen (ZEN)	\$ 1 billion	\$ 100 million	0.1

A = Application coins

Application coins are those, which are part of a specific use case.

Let's take an example. Filecoin (FIL) is the native crypto of the Filecoin network. It can be used to pay miners to store/distribute data and to retrieve information. Storage providers guarantee a minimum service level by providing FIL as collateral.

Some of the leading application cryptos are:

Name	Mcap	Volume	VMR
VeChain	\$ 8.6 billion	\$ 945 million	0.1
Filecoin (FIL)	\$ 6.6 billion	\$ 1.15 billion	0.18
Theta (THETA)	\$ 6.2 billion	\$ 323 million	0.05

S = Security tokens

Security tokens are like equity shares and represent ownership of a company. Some of the common methods in which they are sold are Equity Token Offering (ETO), Simple Agreement for Future Tokens (SAFT), and Security Token Offering (STO).

Example: Exodus

N = Non-Fungible Tokens (NFTs)

Non-Fungible Tokens (NFT) are the crypto versions of things like art, collectibles (trading cards, sneakers), domain names, virtual game items (avatars, skins, weapons, etc.).

Some of the leading application cryptos are:

Name	Mcap	Volume	VMR
Axie Infinity (AXS)	\$ 7.7 billion	\$ 687 million	0.09
Decentraland (MANA)	\$ 7.3 billion	\$ 7.2 billion	0.98
The Sandbox (SAND)	\$ 3.9 billion	\$ 5 billion	1.33
Chiliz (CHZ)	\$ 2.7 billion	\$ 642 million	0.24

A = Algorithmic stablecoins

Algorithmic stablecoins are cryptos whose price stability is maintained by an algorithm. They are different from fiat-pegged stablecoins whose stability is maintained by the asset they have pegged to e.g. US dollar.

Example: Frax (FRAX)

G = Governance tokens

Governance tokens gives holders a vote in a blockchain's development.

Example: Uniswap (UNI)

P = Public Blockchain natives

Using a public blockchain involves the payment of gas fees or transaction fees. This fee is payable in the native coin of that blockchain.

Some of the leading public blockchain native cryptos are:

Name	Mcap	Volume	VMR
Ether (ETH)	\$ 490 billion	\$ 23 million	0.05
Binance Coin (BNB)	\$ 93 billion	\$ 3.3 million	0.04
Solana (SOL)	\$ 61 billion	\$ 4.4 billion	0.07
Cardano (ADA)	\$ billion	\$ 60 billion	0.04
Polkadot (DOT)	\$ billion	\$ 39 billion	0.06

A = Asset-backed tokens

An asset-backed token or a Wrapped Asset is a blockchain token pegged to or collateralized by an asset such as art, gold, fiat currency, debt instrument, equity shares, trade invoices, real estate, etc.

It's called a "wrapped" asset or token because the original asset is put in a "wrapper" or "digital vault" that enables the wrapped version to be traded on a blockchain.

Example: Coffee coin

L = Lending / Borrowing cryptos

These tokens make it easy for investors to borrow and lend funds in a DeFi or Decentralised Finance market.

Some of the leading lending / borrowing cryptos are:

Name	TVL	Mcap / TVL
Curve (CRV)	\$ 20.6 billion	0.08
Maker DAO (MKR)	\$ 18 billion	0.14
Aave (AAVE)	\$ 16 billion	0.24

3. How should cryptos be regulated

Type of crypto	How they should be regulated
R = Ready money	Ready money cryptos should be regulated by the Central Banks. The fiat-pegged stablecoins should be regulated as pre-paid instruments.
O = Open Blockchain Tokens	Open Blockchain Tokens do not need to be separately regulated as they are issued in conformance with the laws of <i>Wyoming, US</i> .
H = Hush coins	Hush / privacy coins must be banned.
A = Application coins	Application coins should be regulated by the Central Banks as pre-paid instruments.
S = Security tokens	Security tokens should be regulated by the securities regulators.
N = Non-Fungible Tokens (NFTs)	Non-Fungible Tokens should be regulated by the Intellectual Property regulators – copyright, trademark, patent, etc.
A = Algorithmic stablecoins	Algorithmic stablecoins must be regulated by Central Banks as pre-paid instruments.
G = Governance tokens	Governance tokens do not need to be regulated.
P = Public Blockchain natives	Public Blockchain natives should be regulated by the Central Banks as pre-paid instruments.
A = Asset-backed tokens	Asset-backed tokens must be regulated based on the relevant asset e.g. wrapped commodities should be regulated by the commodities regulator.
L = Lending / Borrowing cryptos	Lending / Borrowing cryptos must be regulated by Central Banks as debt instruments.