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A classification framework for digital assets

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A Classification Framework for Digital Assets

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"Classifications can be useful for identifying market cycles and quickly assessing which sectors are outperforming. It enables investors to exploit those narrative plays end enhance the alpha potential of their portfolios."

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Sorting out the Crypto World

According to the data provider CoinMarketCap, there are over 13,000 digital assets, which leads to increasing options as well as confusion for investors. Are there really so many tokens required in order to facilitate payments? How should investors choose amongst the various options? How should investors evaluate and monitor their choices?

**Exhibit 1: Growth of Digital Assets**
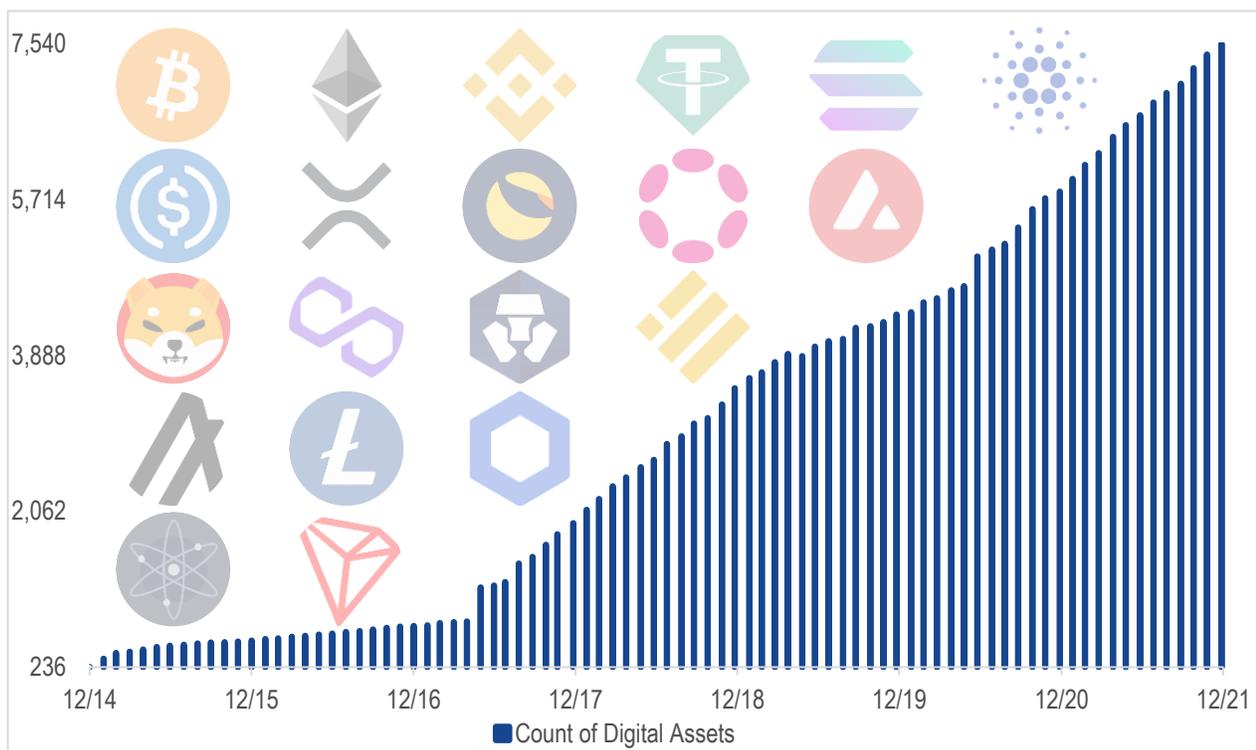
Source: MV Index Solutions Research & CryptoCompare

The answers are not trivial. As software, these tokens perform different functions and their functions and use cases can change over time. To simplify the answers, investors increasingly look at the actual usage and underlying microeconomics of various networks and trading activity around a token's unique drivers of growth. Grouping and categorizing tokens is an important part to structuring optimal investment decisions. MV Index Solutions (MVIS) has developed a classification scheme for digital assets and provides category indices that allows users to measure, benchmark and capture the performance and characteristics of targeted categories within the digital assets, making digital assets more digestible to traditional finance investors while giving crypto native funds additional benchmarking capabilities.

The world has gone from a singular focus on Bitcoin to a wider adoption of DeFi apps, distributed computing platforms, NFTs etc. As with the equity markets, categorization of sub asset groupings into sectors and more recently themes are important in the institutional adoptions of diverse asset classes. MVIS digital asset categories use a top down approach to digital assets to reduce the complexity of the highly fragmented crypto space and to allow investors to see the developments on the market beyond short-term speculation on individual token.

Exhibit 2: Categorizing Digital Assets
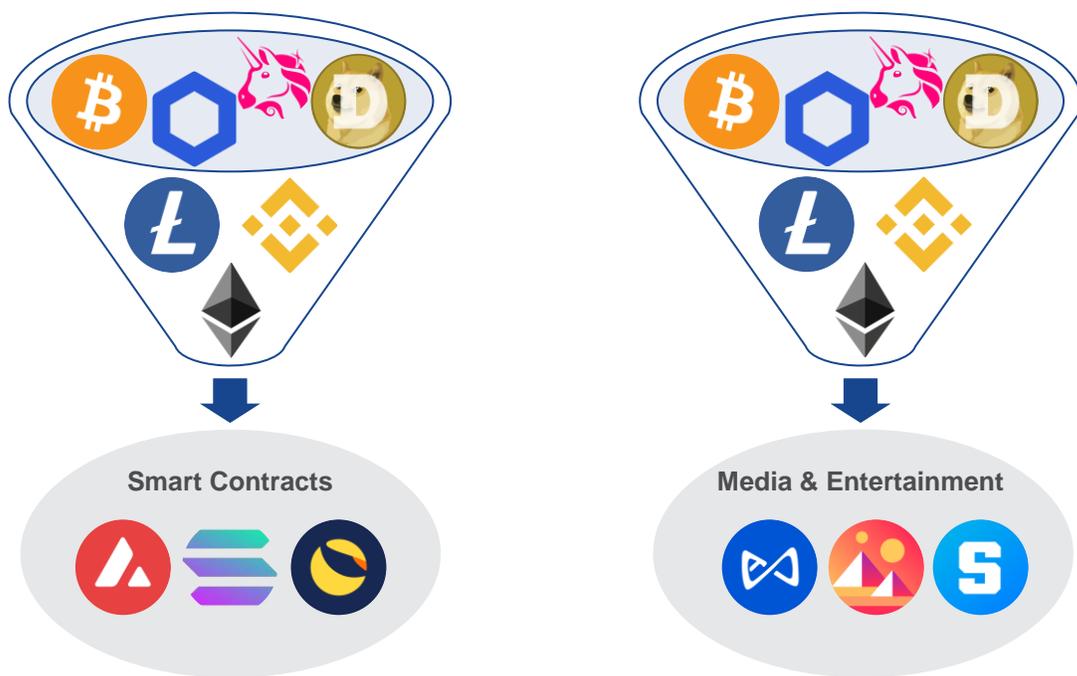
Source: MVIS Research

As the crypto ecosystem is structured in different layers, the first step is to differentiate across the different layers. Settlement layers are the foundation for all activities in a decentralized ecosystem. They consist of the blockchain, as well as its native asset. They store information and value, as well as ownership securely and ensure that any change of the ownership status follows the network's rules. They provide trustless execution and finally serve as the ultimate dispute resolution and settlement layer for transactions and state transitions. Everything built on top of the settlement layer inherits the security and cannot influence its rules or functionality. The asset layer consists of all assets that are issued on top of the settlement layer. This includes the network's native asset (e.g. ETH, SOL, ADA etc.) which fuel and secure the ecosystem. Besides that, different token types such as fungible, semi-fungible and non-fungible token are issued. They serve numerous functionalities, and thus have unique characteristics and properties. The Protocol Layer provides the core functionality of decentralized applications. Decentralized applications are implemented as a smart contract, or collection of smart contracts that can be interacted with by a user or application.

Exhibit 3: Digital Asset Layers
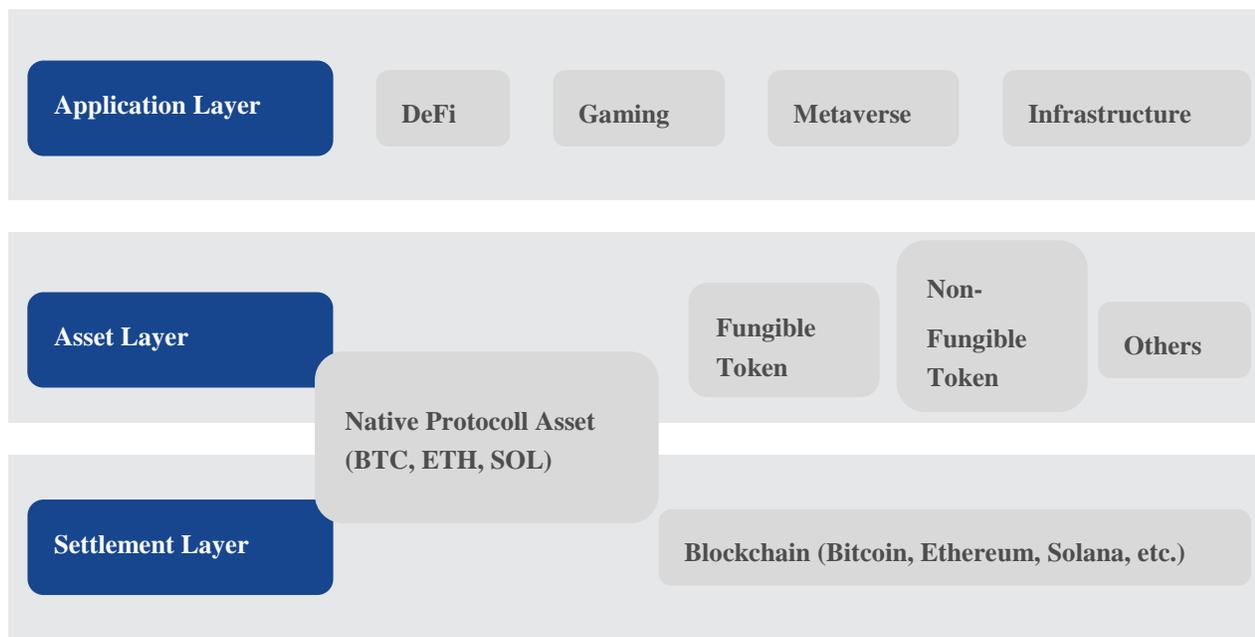
Source: MVIS Research

As the digital asset ecosystem grows and evolves, tracking and defining layers will become more complex.

The **MVIS Digital Asset Classification Scheme**: Built on a history of innovation

In 2017, MVIS in partnership with CryptoCompare — an established London-based digital assets data provider — became the first regulated index provider to launch a series of digital assets indices designed to accurately track the performance of the otherwise fragmented global digital assets markets. These indices were the first to meet applicable benchmarking standards by providing a public rulebook, industry-wide data distribution, proper identifiers and further standard index governance requirements. Today, MVIS is regulated under the EU Benchmark regulation directive and is the first index provider with such regulatory status to offer transparent and industry standard digital asset indices.

In 2021, MVIS introduced a categorization scheme of digital asset coins into distinct, non-overlapping categories that form the building blocks for our new **Digital Asset Classification Scheme**. Categories capture the value and use case related to a coin. We need to appreciate the vast functional differences of crypto assets and yet be able to talk about meaningful high-level crypto asset categories. At the same time, we have to provide both the required level of detail and abstraction.

MVIS's focus is to create a robust classification standard that accurately reflects the digital asset space. Appropriate definitions for each level of the structure are needed in order to provide transparency. The classification is determined based on the business description of the digital asset which is most often found on the digital asset's public website. As

you might know from the Global Industry Classification Standard (GICS), which is widely used by equity investors, MVIS uses the same starting point for digital tokens. With exclusionary categories, each coin can only fit in one category. Any time a coin is greater than 250mn USD in market cap and has an average daily turnover of at least 10mn USD, we do the deep dive to read the white paper, read various third party research, and look at the community -- including telegram, discord channels -- in order to identify the use case.

MVIS uses a qualitative approach focused on the economic drivers behind the protocol. The structure of our classification will be reviewed periodically and require modifications as the digital asset landscape continues to evolve. Any material changes will be announced prior to implementation.

Exhibit 4: MVIS Digital Asset Categories (Top 200 coins)

Category	Definition	Examples	# of coins
DeFi	Financial services built on top of distributed networks with no central intermediaries	Uniswap, Aave	41
Exchange	Tokens owned and operated by a centralized cryptocurrency exchange	Binance, FTX	13
Infrastructure Applications	A decentralized computer program designed to perform specific tasks	Polygon, Chainlink	48
Media & Entertainment (Metaverse)	Used to reward users for content, games, gambling or social media	Axie Infinity, Decentraland, Basic Attention Token	19
Payments	Digital, non-stable money for use in distributed network	Bitcoin Cash, Litecoin, Dogecoin	37
Smart Contract Platforms	Blockchain protocol designed to host variety of self-developed and 3rd party applications	Ethereum, Polkadot, Solana	28
Stablecoins	Designed to minimize volatility by pegging to a more stable asset	Tether, USDC	12
Store of Value	Designed to hold or increase purchasing power over time	Bitcoin, wrapped Bitcoin	3

Source: MVIS Research

The MVIS categorization model can be used to

- differentiate crypto asset sectors,
- diversify crypto asset portfolios and
- analyze individual, peer and aggregated performance review.

As the basis for investable indices, the MVIS categories can provide the underlying components to build an investment solution aimed at capturing the performance of the coins within the category or provide guidance on how to allocate across categories.

Category Performance

Our analysis of cumulative returns revealed that the performance of digital asset sectors differ significantly. Phases of high correlation can alternate with phases of high dispersion. Exhibit 4. Illustrates the performance differences amongst crypto categories. Between September and December 2021, the Media & Entertainment category (Decentraland, Axie, Flow etc.) returned 83%, while Decentralized Finance (Uniswap, AAve, Maker etc.) underperformed and returned a disappointing -9%.

Exhibit 5: Cumulative returns by Classification
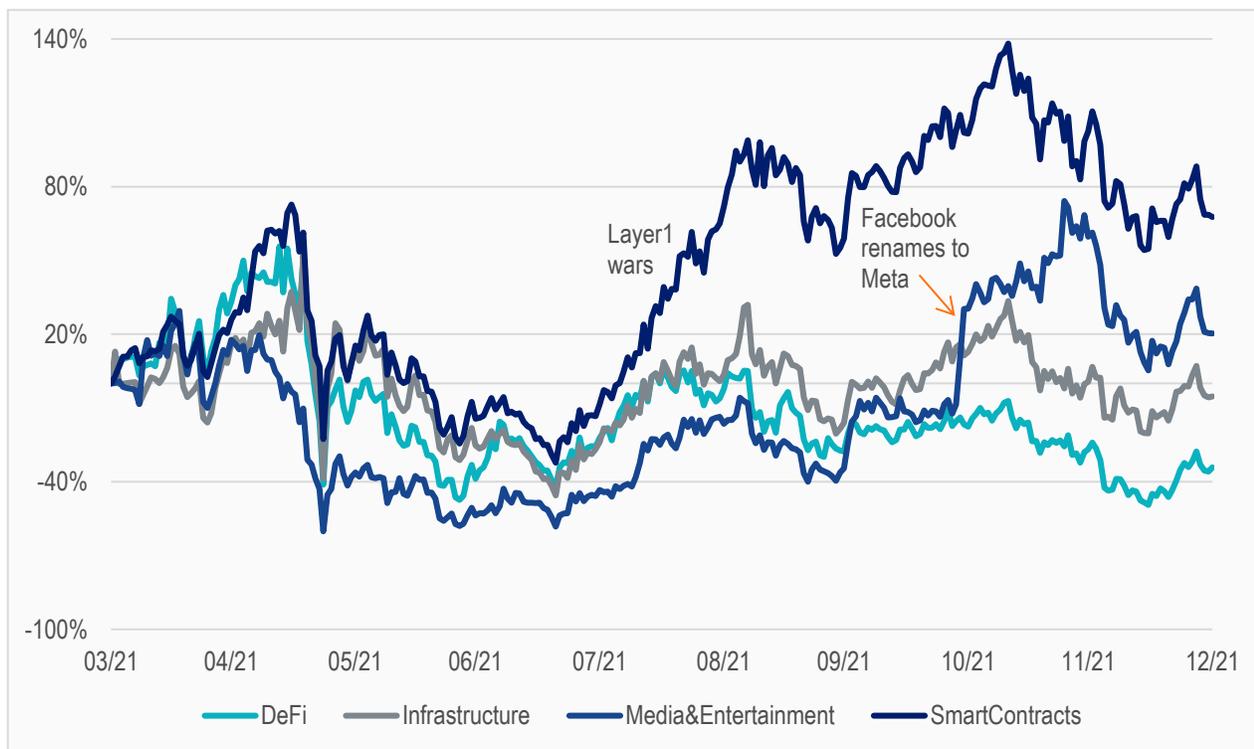
Source: MVIS Research, CryptoCompare

The crypto space is largely narrative-driven. Mini cycles change on a constant basis and rotate between sectors. We all remember the DeFi summer of 2020 which was the followed by the DeFi winter in 2021. As media attention turns toward Meta (the company previously incorporated as Facebook), the performance of tokens in the Media & Entertainment (Metaverse), have been lifted by 48% within 3 days; but this may change abruptly.

Integrating Classification Schemes to Deliver Better Investment Solutions

MVIS has four digital asset categories available [link to website]

- The MVIS CryptoCompare Decentralized Finance Index (ticker: MVDF),
- The MVIS CryptoCompare Infrastructure Application Index (ticker: MVIAP),
- The MVIS CryptoCompare Media & Entertainment Index (ticker: MVME),
- The MVIS CryptoCompare Smart Contract Index (ticker: MVSC)

These broad category indices capture the performance of coins with $250m market cap and $10m ADTV. In addition to the broad categories, MVIS provides a Leaders Index for each index category. The Leaders Indices capture the performance of coins with $1bn market cap and $25m ADTV, and introduces additional screening requiring the coins to be traded on a major US exchange and supported by a reputable crypto custodian. In addition, the investable Leaders indices include a 20% buffer for existing constituents so as to limit turnover.

- The MVIS CryptoCompare Decentralized Finance Leaders Index (ticker: MVDFLE),
- The MVIS CryptoCompare Infrastructure Application Leaders Index (ticker: MVIALE),
- The MVIS CryptoCompare Media & Entertainment Leaders Index (ticker: MVMELE),
- The MVIS CryptoCompare Smart Contract Leaders Index (ticker: MVSCLE).

As you can see from Exhibit 6, the pairwise correlations between the broad and the leaders index are quite high. Thus, the leaders index can provide sector performance with a larger minimum liquidity requirement.

Exhibit 6: Pairwise Correlations

	DeFi Leaders	Infrastructure	Infrastructure Leaders	M&E	M&E Leaders	Smart Contracts	Smart Contracts Leaders
DEFi	0.96	0.92	0.87	0.80	0.74	0.90	0.88
DeFi Leaders		0.87	0.89	0.76	0.76	0.91	0.88
Infrastructure			0.92	0.85	0.77	0.90	0.91
Infrastructure Leaders				0.77	0.77	0.89	0.90
M&E					0.89	0.80	0.81
M&E Leaders						0.77	0.78
Smart Contracts							0.97

Source: MVIS, based on daily returns

Of the current MVIS categories identified, some are not, at present, suitable for building investable indices:

- Exchange: many exchange tokens such as BNB (Binance) and FTT (FTX) may eventually end up classified as securities by US regulators. Indeed, some of the largest exchanges are already public or planning IPOs. As such, we see less demand from market participants at the moment for an investable index based on this category.

- Payments: this category includes meme coins such as Dogecoin and Shiba Inu, and prominent forks such as Bitcoin Cash and Bitcoin SV. While a "meme coin" category might emerge in future iterations, for now, MVIS sees less demand among market participants for a category that includes both meme coins and prominent forks. If and as the digital assets market cap grows as we expect, investors should expect further sub-categorization of "Payments" etc.

- Stablecoins: these coins aim to peg their value to another asset. While MVIS believes market participants will find value in an index that tracks the yields on stablecoins, there is currently no use case for a stablecoin price index.

- Store of Value: this category includes Bitcoin, wrapped Bitcoin and Bitcoin Gold. Bitcoin itself offers pure enough exposure to this category.

Classifications can be useful for identifying market cycles and quickly assessing which sectors are outperforming. Classifications enable investors to exploit those narrative plays and can enhance the alpha potential of their portfolios. MVIS digital asset category indices allow users to measure, benchmark, and capture the performance and characteristics of targeted categories, enabling digital assets to be more comprehensible to traditional finance investors, while providing crypto native funds additional benchmarking capabilities.

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Martin Leinweber

Martin is a Digital Asset Product Strategist at MV Index Solutions, providing thought leadership in an emerging asset class. His role encompasses product development, research and client communication an expert in fundamental and quantitative trading strategies. Martin considers cryptoassets as a fundamental building block for investors to achieve their long-term return objectives. Prior to joining MVIS, he worked as a portfolio manager for equities, fixed income and alternative investments for almost two decades. He was responsible for the management of active funds for institutional investors such as insurance companies, pension funds and sovereign wealth funds at the leading German quantitative asset manager Quoniam. Previously, he held various positions at one of Germany's largest asset managers, MEAG, the asset manager of Munich Re and ERGO. Among other things, he contributed his expertise and international experience to the establishment of a joint venture with the largest Chinese insurance company PICC in Shanghai and Beijing. Martin Leinweber is co-author of „Asset-Allokation mit Kryptoassets. Das Handbuch" (Wiley Finance, 2021). It's the first book about integrating digital assets into traditional portfolios. He has a Master in Economics from the University of Hohenheim and is a CFA Charterholder.

Joy Yang

Joy Yang is Global Head of Index Product Management at MV Index Solutions (MVIS). She is responsible for managing MVIS products and services to accelerate innovation in financial index design and adoption. Joy brings more than 25 years of investment experience to MVIS, having led teams delivering index and quantitative-active investment solutions at Arabesque Asset Management, Dimensional Fund Advisors, Vanguard, Aberdeen Standard Investments, AXA Rosenberg and Barclays Global Investors (now Blackrock). Joy has an MBA from the University Of Chicago Booth School Of Business, and a BS in Electrical Engineering from Cooper Union's Albert Nerken School of Engineering.

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