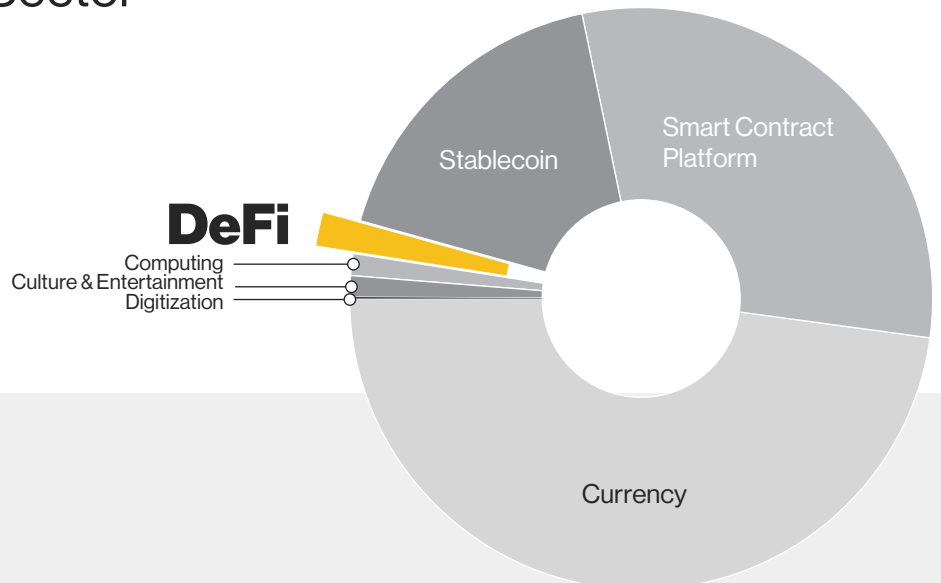


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Diving Deep Into DeFi to Navigate the New Wave of Finance

A Primer on the DeFi Sector



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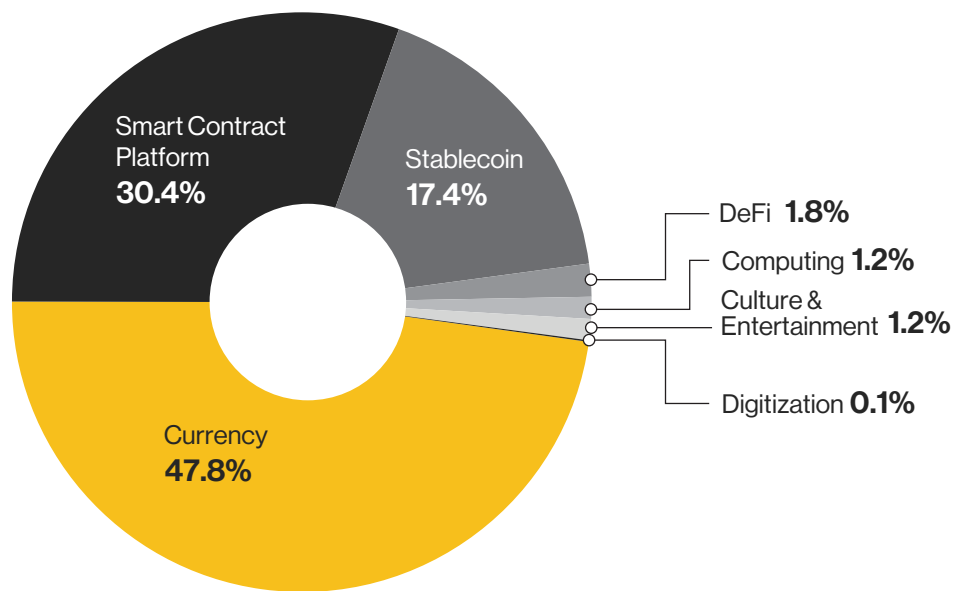
Introduction

In December 2021, CoinDesk Indices launched its **Digital Asset Classification Standard (DACS)** to set the standard for defining the industries of digital assets. Every one of the top 500 digital assets by market capitalization is assigned to an industry, defined by DACS, and then at least one industry is assigned to an industry group. Finally, at least one industry group is assigned to a sector.

Currently, there are seven sectors defined by DACS. They include Currency, Computing, DeFi (Decentralized Finance), Digitization, Culture & Entertainment, Smart Contract Platform, and Stablecoin. The DeFi sector is the fourth-largest sector in DACS, with 104 assets representing 1.8% of the digital asset market worth approximately \$14.6 billion in market capitalization as of December 31, 2022.

Exhibit 1

CoinDesk Indices DACS



Source: CoinDesk Indices. 1/13/2023. Market capitalization data is based on 12/31/2022

In this paper, we describe the DeFi sector in further detail by discussing its definition, constituents and the significance it holds in the broader digital asset space.

Defining the DeFi Sector

Decentralized Finance, also known as DeFi, enables and empowers individuals to take control over their finances. By replacing traditional institutions with trustless, transparent and immutable code in the form of smart contracts, people can effectively be their own bank.

DeFi is powered primarily by a range of decentralized applications (dapps), all of which are openly accessible to anyone using blockchain technology. Most traditional financial services are available in DeFi form, with innovation shaping things in this space at a rapid pace. Examples of such services include decentralized exchanges (DEX), derivatives trading, borrowing and lending platforms, asset management platforms and other financial instruments. As

various heterogeneous chains become more and more interoperable and interconnected, DeFi will become even more accessible and ubiquitous.

The [DACS Glossary](#) defines the DeFi sector as follows:

DeFi refers to projects that support financial products and services that are not facilitated or controlled by any central entity. These financial products and services are accessible without any barrier to entry or identification requirements. All DeFi tokens must be created on smart contract platforms and offer open-sourced liquidity with the ability for token holders to reserve governance rights.

Industry Groups Inside the DeFi Sector

The digital assets that are assigned to industries in the DeFi sector are consolidated into eight industry groups. Within the DeFi sector, the Exchanges industry group has the most assets, currently at 35. The market capitalization of this industry group adds up to 53.4% of the sector's market capitalization, making it the biggest of the industry groups inside DeFi. The Exchanges industry group is extremely important due to its size and its ability to contain all decentralized platforms that enable peer-to-peer and on-chain trading of various digital assets.

The Decentralized Autonomous Organization (DAO) and Credit Platform industry groups represent 15.3% and 11.5% of the sector's market capitalization, respectively. Both industry groups share approximately the same number of assets, at 14 and 13, respectively. DAO is an industry group with a wide range of services that are all centered around the

dynamics of a governance token. These dynamics empower their owners with voting rights over the activities of the organization. The Credit Platform industry group is somewhat more concentrated, with fewer assets and a slightly larger size. It includes open and trustless platforms for users to deposit digital assets as collateral and subsequently borrow against those assets.

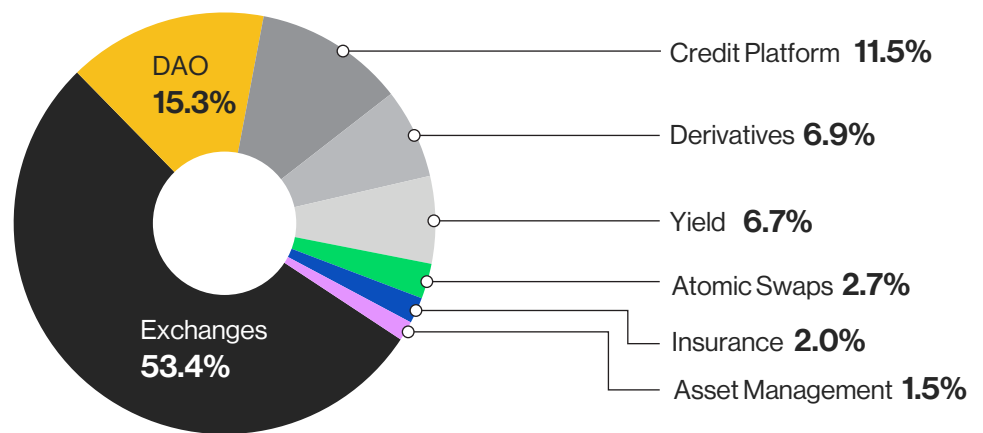
The Derivatives industry group comprises 6.9% of the sector's market capitalization. Derivatives include tokens that support options, futures, perpetual swaps, margin trading and leverage. Derivatives can also include synthetic derivatives that tokenize real-world assets.

Yield, Atomic Swaps, Insurance and Asset Management make up the bottom 6.7%, 2.7%, 2.0% and 1.5%, respectively. They are defined as follows:

- **Yield** includes all DeFi vaults in which depositors can stake assets in a yield-bearing vault that aggregates a positive yield from various DeFi platforms and assets.
- **Atomic Swaps** are a form of peer-to-peer, cross-chain transfer. With the help of a trustless smart contract acting as an intermediary, two parties on two different chains can exchange one digital asset for another.
- **Insurance** allows users to purchase insurance via a smart contract on digital asset-related risks.
- **Asset Management** consists of projects that allow any aspiring portfolio manager to create and trade a basket of digital assets that prospective investors can invest in by purchasing the tokens.

Exhibit 2

DeFi Sector breakdown by Industry Group



Source: CoinDesk Indices, 1/13/2023. Market capitalization data is based on 12/31/2022.

Exhibit 3

Industry Groups under DeFi Sector

Industry Group	Market Cap (\$)	No. of Assets	% of Market Cap
Exchanges	7,805,035,828	35	53.4%
DAO	2,239,006,283	14	15.3%
Credit Platform	1,678,916,720	13	11.5%
Derivatives	1,003,262,189	13	6.9%
Yield	981,879,751	13	6.7%
Atomic Swaps	395,493,134	8	2.7%
Insurance	295,704,815	2	2.0%
Asset Management	220,445,616	6	1.5%

Source: CoinDesk Indices, 1/13/2023. Market capitalization data is based on 12/31/2022.

Industries Inside the DeFi Sector

Each one of the 104 digital assets inside the DeFi sector is assigned to a single industry before the industry is assigned to an industry group in the sector. There are 13 industries that feed into the eight industry groups mentioned previously: Yield is the only industry assigned to the Yield industry group; AMM, Exchanges (Other) and CLOB are the three industries assigned to the Exchanges industry group; Credit Platform (Other) and Lending/Borrowing are the two industries assigned to the Credit Platform industry group. Active DAO, DAO (Other), and DAO Builder are the three industries assigned to the DAO industry group. Derivatives, Atomic Swaps, Insurance and Asset Management are the only industry groups with namesake industries.

Yield allows participants to stake digital assets and earn a passive income, either by leveraging the aggregation of existing

DeFi platforms or by auto-compounding passive yields earned through liquidity pools, farms, or other dapps.

Within the Exchanges industry group, automated market makers (AMM) such as Uniswap utilize a user-funded liquidity pool and AMM mechanism to allow exchange between two digital assets without the need for a centralized order book. CLOB, which is short for Central Limit Order Book, allows decentralized trading backed by an order book. Exchanges (Other) is made up of all digital assets that fall into the Exchanges industry group but could not be further classified.

As of December 31, 2022, AMM was the largest industry by market capitalization under the Exchanges industry group, with 21 assets totaling \$6.7 billion in market capitalization, followed by Exchanges (Other) and CLOB.

Exhibit 4

Industries under the Exchanges Industry Group

Industry Group	Market Cap (\$)	No. of Assets	% of Market Cap
AMM	6,714,153,813	22	84.6%
Exchanges (Other)	999,755,769	11	12.6%
CLOB	220,445,616	2	2.8%

Source: CoinDesk Indices, 1/13/2023. Market capitalization data is based on 12/31/2022.

Within the Credit Platform industry group, the Lending/Borrowing industry is where decentralized applications provide an open and trustless platform for users to deposit digital assets as collateral and borrow against those assets. Credit platforms such as Aave use a series of smart contracts to manage rates for borrowing and lending. They can also force liquidations if a loan gets too close to a predetermined loan-to-value ratio.

Credit Platform (Other) is made up of all digital assets that fall into the Credit Platform industry group but could not be further classified.

As of December 31, 2022, Lending/Borrowing was the largest industry by market capitalization under the Credit Platform industry group, with 11 assets totaling \$1.5 billion in market capitalization, followed by Credit Platform (Other).

Exhibit 5

Industries under the Credit Platform Industry Group

Industry Group	Market Cap (\$)	No. of Assets	% of Market Cap
Lending / Borrowing	1,454,461,875	11	86.6%
Credit Platform (Other)	224,454,845	2	13.4%

Source: CoinDesk Indices, 1/13/2023. Market capitalization data is based on 12/31/2022.

Within the DAO industry group, Active DAOs can be thought of as loose conglomerations of individuals and entities where an initial set of rules and goals is established. For example, in the case of Maker, a treasury-backed stablecoin, participants can have a say in the management of the project. DAO Builder is an industry wherein platforms are designed to help users build DAOs.

DAO (Other) is made up of all digital assets that fall into the DAO industry group but could not be further classified.

As of December 31, 2022, Active DAO was the largest industry by market capitalization under the industry group, with 8 assets totaling \$1.7 billion in market capitalization, followed by DAO (Other) and DAO Builder.

Exhibit 6

Industries under the DAO Industry Group

Industry Group	Market Cap (\$)	No. of Assets	% of Market Cap
Active DAO	1,692,146,546	8	75.6%
DAO (Other)	419,133,372	4	18.7%
DAO Builder	127,726,365	2	5.7%

Source: CoinDesk Indices, 1/13/2023. Market capitalization data is based on 12/31/2022.

Major Assets Inside the DeFi Sector

There are 104 digital assets inside the DeFi sector, with the top asset, Uniswap (UNI)¹, representing over 26.9% of the sector and the top ten assets representing 55.9%.

Exchanges is the largest industry group under DeFi, with 35 assets and \$7.8 billion in market capitalization. Within Exchanges, UNI, CAKE, RUNE, GMX, OSMO and 1INCH are ranked in the top 10 of the sector by market capitalization. DAO is the second-largest industry group under DeFi, with 14 assets and \$2.2 billion in market capitalization. Two out of the sector's top 10 assets belong to the DAO industry group, with BIT as the largest followed by MKR². Credit Platform has 13 assets

totaling \$1.7 billion in market capitalization, with AAVE³ being the largest of them. Derivatives has 13 assets totaling \$1.0 billion in market capitalization, with SNX as the largest.

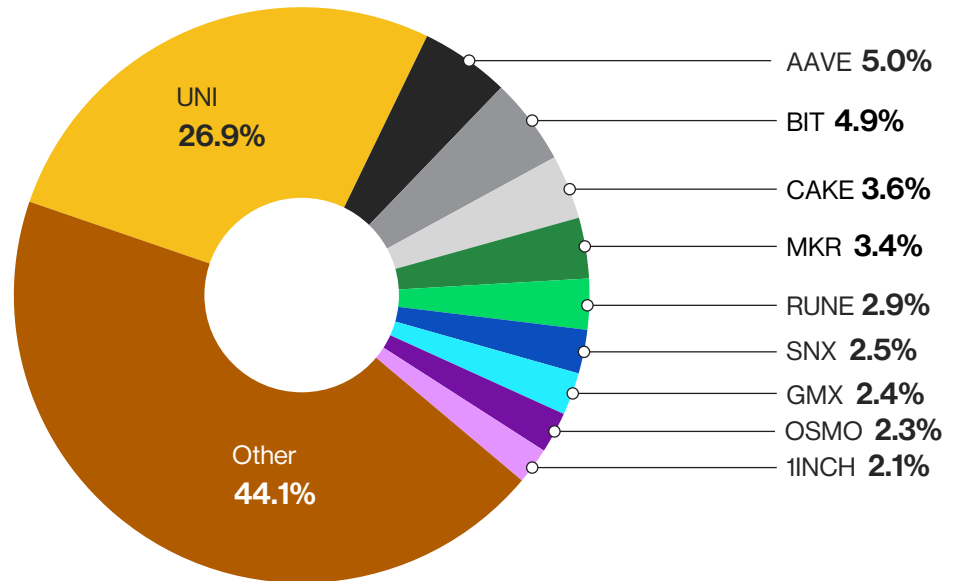
There are currently 13 assets in the Yield industry group with \$982 million in market capitalization; eight assets in the Atomic Swaps industry group, totaling \$395 million in market capitalization; two assets in the Insurance industry group with a total market capitalization of \$296 million, and six assets in the Asset Management industry group, totaling \$220 million in market capitalization, although none of these assets made it to the sector top 10.

Exhibit 7

Top 10 Assets inside the DACS DeFi Sector

CoinDesk Indices DACS DeFi Sector Top 10 Assets

January 2023



Source: CoinDesk Indices, 1/13/2023. Market capitalization data is based on 12/31/2022.

Conclusion

The DeFi sector is the hub for on-chain financial activity, whether in the form of exchanges between digital assets, yield farming, or borrowing and lending. The sector acts as the on-ramp between traditional fiat currency and a myriad of dapps that can only be accessed on the blockchain.

DeFi serves as the front end for the digital economy, with dapps responsible for the majority of on-chain transactions and

activities. Their underlying technologies empower participants to take ownership of their finances and interact in unique and unprecedented ways. As DeFi dapps become more interoperable and collaborative, ecosystems begin to form and attract droves of users and developers alike. Overall, DeFi remains one of the fastest growing and evolving sectors in the digital asset space.

Relevant Indices

CoinDesk Uniswap Price Index ([UNX](#))

CoinDesk Market Index ([CMI](#))

CoinDesk Market Index Plus Stablecoin ([CMIP](#))

CoinDesk Market Select Index ([CMIS](#))

CoinDesk DeFi Index ([DCF](#))

CoinDesk DeFi Select Index ([DFX](#))

CoinDesk Industry Group Select Equal Weight Index ([DIGS](#))



References

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- 1 **Uniswap (UNI)** is the largest decentralized exchange (DEX) and AMM, both by market capitalization and transaction volume in the digital asset space. Uniswap uses an innovative Automated Market Maker smart contract to allow traders to swap between two digital assets without the need for an order book or centralized entity to facilitate the exchange. Originally launching on the Ethereum blockchain, Uniswap has since expanded its capabilities to Polygon and other Ethereum layer 2 blockchains, including Arbitrum and Optimism.
 - 2 **Maker (MKR)** is a DAO and governance token on the Ethereum blockchain, whose primary purpose is to support and regulate its stablecoin, DAI. DAI is a decentralized, over-collateralized, U.S. dollar-pegged cryptocurrency. Users can generate (or borrow) DAI by depositing collateral with the platform. Maker then uses a series of smart contracts and incentive mechanisms to maintain the overall price stability of DAI, including appointing MKR holders as buyers of last resort.
 - 3 **Aave (AAVE)** is the largest credit platform. Also built on the Ethereum blockchain, Aave's open protocol allows users to deposit funds to lend and earn a passive yield, or alternatively, they can borrow against that collateral without the need for credit approval. Aave instead uses an automatic liquidation smart contract to maintain the stability of its lending pools. Aave has since expanded its services to a number of other layer 1 and layer 2 blockchains, with billions in total value locked (TVL).



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