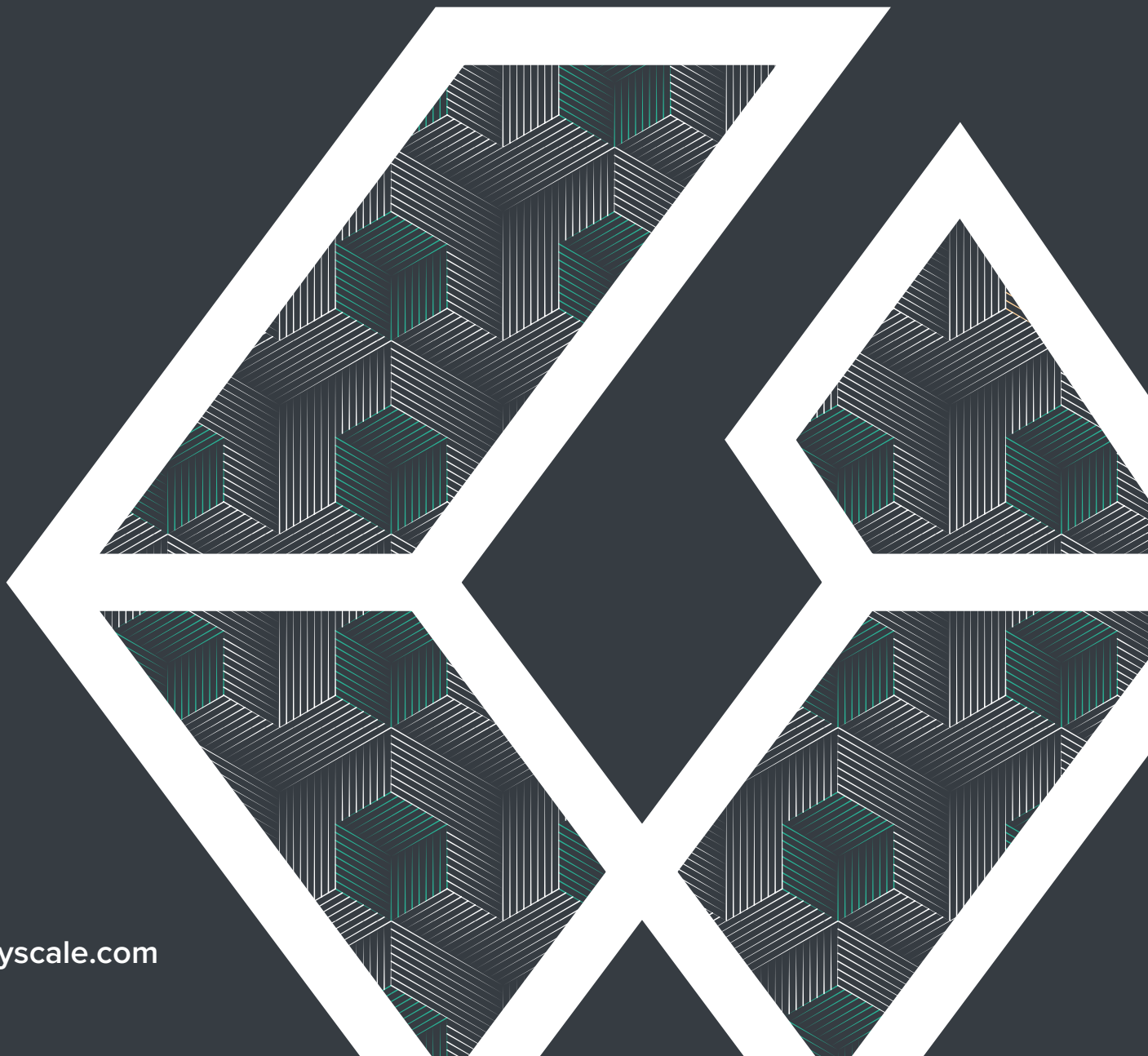
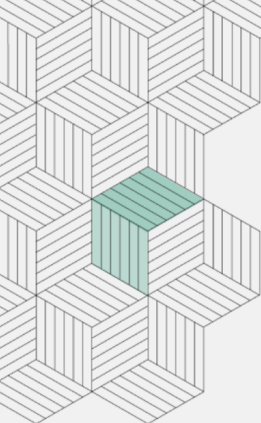


A primer on Decentralized Finance (DeFi)





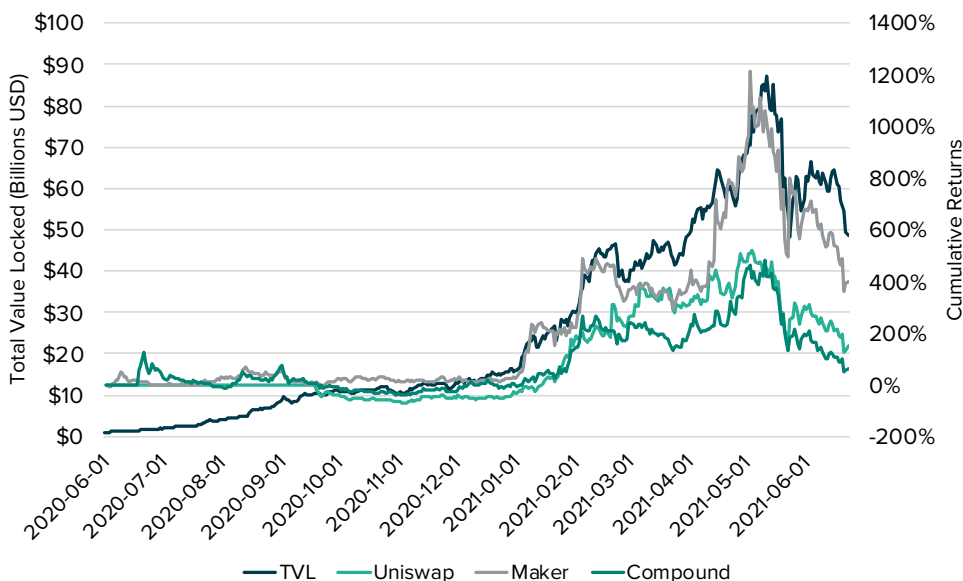
Decentralized Finance (“DeFi”) has become ubiquitous with digital assets, but what is it? In this short piece, we’ll attempt to answer these questions by providing an overview of decentralized finance, discussing use cases, and examining several native tokens associated with well-known DeFi protocols.

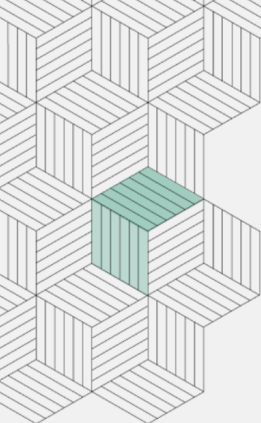
What is DeFi?

Often described as “traditional finance meets decentralization”, DeFi is an umbrella term used to describe a variety of financial applications that use smart contracts to allow autonomous execution. This means that services typically provided by intermediaries—such as an exchange or clearing house—can instead be deployed as code running on an open blockchain network such as Ethereum, and are accessible by those who have an Internet connection and a digital asset wallet.

The DeFi market, as measured by Total Value Locked (“TVL”), has grown from \$1 billion in June 2020 to over \$50 billion today. TVL is the value of assets locked in DeFi smart contracts and is an indicator of a protocol’s usage and liquidity.

FIGURE 1: DeFi CUMULATIVE TOKEN RETURNS VS. TOTAL VALUE LOCKED (TVL)





Defining Characteristics



















DeFi supplants traditional banking & financial services through decentralized applications (dApps), which are designed to be *transparent* and *permissionless*, eliminating intermediaries.

- **Transparent:** DeFi protocols are a set of open-source smart contracts that can be audited and reviewed by the community.
- **Permissionless:** Eligibility requirements prevent many people from accessing traditional financial services. DeFi allows any user with a crypto wallet and funds to participate in the protocol.

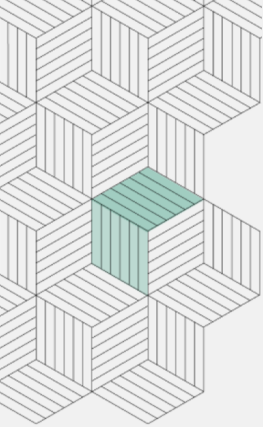
Instead of interacting with a centralized authority to borrow, lend, or trade, users interact directly with decentralized protocols from their wallet. Funds are custodied by smart contracts and positions can be opened, closed, or rebalanced 24/7, 365 days per year, by anyone in the world.

Use Cases

The largest DeFi protocols serve as decentralized analogs to many familiar services provided by incumbent finance institutions. The table below exemplifies a few decentralized protocols that act as a counterpart to both traditional and digital asset financial services.

	Decentralized	Centralized (Crypto)	Centralized (Traditional Finance)
Stablecoins	 MAKER	 tether	
Lending & Borrowing	 Compound	 BlockFi	 ROCKET Mortgage by Quicken Loans
Exchanges	 UNISWAP	 coinbase	 Robinhood
Derivatives	 SYNTHETIX	 Deribit	 CME Group
Data	 Chainlink	 COINMETRICS	 Bloomberg
Asset Management	 Yearn.Finance	 GRAYSCALE	 BlackRock.





Examining Some Well-Known Protocols

Decentralized Stablecoins



MakerDAO

The Maker protocol emerged as one of the first essential building blocks of DeFi by introducing one of the first decentralized stablecoins, DAI. Stablecoins such as Tether and USD Coin (USDC) are generally backed by dollar reserves. Instead, Maker smart contracts accept ETH as collateral to mint DAI. Maker overcollateralizes the minted DAI and uses the MKR token to maintain price stability. DAI is the primary stablecoin used in DeFi.

Decentralized Lending & Borrowing



Compound

The Compound protocol was one of the first DeFi apps to gain mainstream attention as a lending and borrowing protocol. Similar to Maker, users deposit collateral to borrow assets. However Compound does not issue direct loans. Instead, it draws from a pool of liquidity supplied by Compound users and institutions via the Compound Treasury. For example, a user deposits DAI to earn interest, and borrows ETH while paying interest. In other words, a user can lend assets to offset the interest payment of the user's borrowed assets.

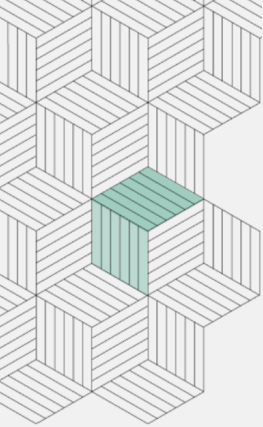
Decentralized Exchange



Uniswap

The Uniswap protocol is an Automated Market Maker (AMM) that allows users to trade Ethereum-based tokens. Trades are executed using liquidity pools that users deposit funds to in exchange for interest. For example, users can deposit ETH and USDC to earn a portion of the fees collected by the protocol.





Investment Opportunity

DeFi projects create tokens to support governance and treasury spending of their decentralized autonomous organization (“DAO”). Treasuries are used to support community development with developer grants, airdrops, and lobbying. The tokens typically have a fixed supply and permit holders to do a combination of things, including:

- Propose & vote on protocol changes
- Vote on DAO Treasury spending
- Stake or delegate tokens for interest
- Protocol-specific utility

Despite the technology being in its nascent stages, DeFi usage and TVL is growing rapidly. As more users interact with DeFi protocols, tokens will circulate to be used for protocol-specific utility, yield farming, voting, and trading. DeFi protocols are also very profitable due to the virtually non-existent operating costs and token holders will have crucial voting rights over future cash flows as the ecosystem matures. The Internet was the last major innovation in the financial services industry and DeFi is creating the new paradigm built on decentralized assets where value accrues to the users—token holders.

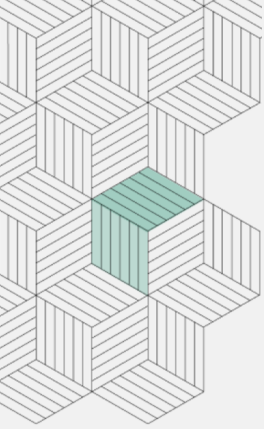
Conclusion

Today, over 2.3 billion people are excluded from the traditional financial system and even more lack access to sophisticated services such as borrowing, lending, and asset management. Decentralized digital assets are revolutionizing the global transfer of value and require decentralized financial services to support it. While DeFi is still nascent technology, it has the ability to revolutionize the global financial services market (estimated at \$21 trillion) and pave the way for a more accessible, and efficient financial system.

DeFi protocols pose heightened regulatory concerns. That is because financial services are extensively regulated with a particular focus on intermediaries such as banks, broker-dealers, exchanges, clearinghouses and custodians. Any action taken by policymakers or regulators to address risks of DeFi could have a material adverse impact on an investment that derives value from DeFi. To that end, it is critical that investors carefully evaluate the merits of using DeFi and seek independent advice before investing in any DeFi protocol or underlying digital asset. Projects such as Uniswap are actively working to combat potential regulatory scrutiny through a lobbying fund.

To the extent you are interested in investing in the DeFi, we invite you to consider the Grayscale DeFi Fund. Please reach out to info@grayscale.com if you have any questions on DeFi or any of our 14 other Grayscale products. Qualified investors can view the products currently available at grayscale.com/startinvesting.



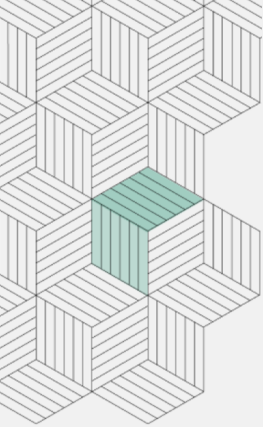


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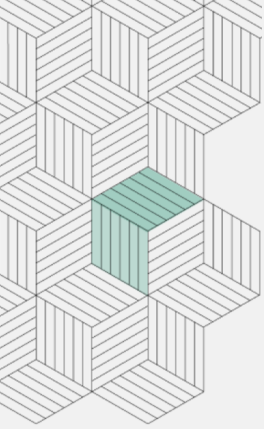
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Note On Hypothetical Simulated Performance Results

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The hypothetical simulated performance results are based on a model that used inputs that are based on assumptions about a variety of conditions and events and provides hypothetical not actual results. As with all mathematical models, results may vary significantly depending upon the value of the inputs given, so that a relatively minor modification of any assumption may have a significant impact on the result. Among other things, the hypothetical simulated performance calculations do not take into account all aspects of the applicable asset's characteristics under certain conditions, including characteristics that can have a significant impact on the results. Further, in evaluating the hypothetical simulated performance results herein, each prospective investor should understand that not all of the hypothetical assumptions used in the model are described herein, and conditions and events that are not accounted for by the model may have a significant adverse effect on the performance of the assets described herein. Prospective investors should consider whether the behavior of these assets should be tested based on different and/or additional assumptions from those included in the information herein.

IN ADDITION TO OTHER DIFFERENCES, PROSPECTIVE INVESTORS IN A PRODUCT SHOULD NOTE THE FOLLOWING POTENTIALLY SIGNIFICANT DIFFERENCES BETWEEN THE ASSUMPTIONS MADE IN THE HYPOTHETICAL SIMULATED PERFORMANCE RESULTS INCLUDED HEREIN AND THE CONDITIONS UNDER WHICH A PRODUCT WILL PERFORM, WHICH COULD CAUSE THE ACTUAL RETURN OF SUCH PRODUCT TO DIFFER CONSIDERABLY FROM RETURNS SET FORTH BY THE HYPOTHETICAL SIMULATED PERFORMANCE, TO BE MATERIALLY LOWER THAN THE RETURNS AND TO RESULT IN LOSSES OF SOME OR ALL OF THE INVESTMENT BY PROSPECTIVE INVESTORS:

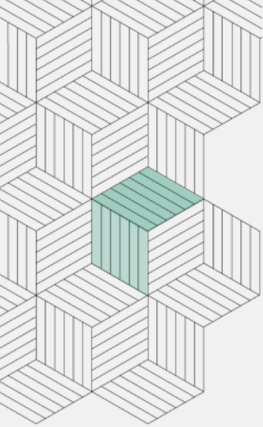
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The hypothetical simulated performance results do not reflect the impact the market conditions may have had upon a Product were it in existence during the historical period selected. The hypothetical simulated performance results do not reflect any fees incurred by a Product. If such amounts had been included in the hypothetical simulated performance, the results would have been lowered.

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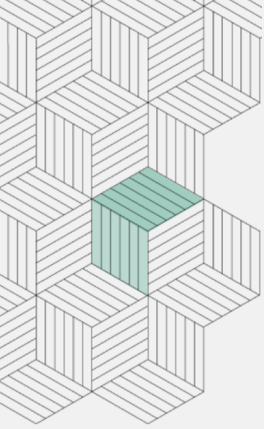


Certain Risk Factors

Each Product is a private, unregistered investment vehicle and not subject to the same regulatory requirements as exchange traded funds or mutual funds, including the requirement to provide certain periodic and standardized pricing and valuation information to investors. There are substantial risks in investing in a Product or in digital assets directly, including but not limited to:

- **PRICE VOLATILITY**
Digital assets have historically experienced significant intraday and long-term price swings. In addition, none of the Products currently operates a redemption program and may halt creations from time to time. There can be no assurance that the value of the common units of fractional undivided beneficial interest (“Shares”) of any Product will approximate the value of the digital assets held by such Product and such Shares may trade at a substantial premium over or discount to the value of the digital assets held by such Product. At this time, none of the Products is operating a redemption program and therefore Shares are not redeemable by any Product. Subject to receipt of regulatory approval from the SEC and approval by Grayscale, in its sole discretion, any Product may in the future operate a redemption program. Because none of the Products believes that the SEC would, at this time, entertain an application for the waiver of rules needed in order to operate an ongoing redemption program, none of the Products currently has any intention of seeking regulatory approval from the SEC to operate an ongoing redemption program.
- **MARKET ADOPTION**
It is possible that digital assets generally or any digital asset in particular will never be broadly adopted by either the retail or commercial marketplace, in which case, one or more digital assets may lose most, if not all, of its value.
- **GOVERNMENT REGULATION**
The regulatory framework of digital assets remains unclear and application of existing regulations and/or future restrictions by federal and state authorities may have a significant impact on the value of digital assets.
- **SECURITY**
While each Product has implemented security measures for the safe storage of its digital assets, there have been significant incidents of digital asset theft and digital assets remains a potential target for hackers. Digital assets that are lost or stolen cannot be replaced, as transactions are irrevocable.
- **TAX TREATMENT OF VIRTUAL CURRENCY**
For U.S. federal income tax purposes, Digital Large Cap Fund will be a passive foreign investment company (a “PFIC”) and, in certain circumstances, may be a controlled foreign corporation (a “CFC”). Digital Large Cap Fund will make available a PFIC Annual Information Statement that will include information required to permit each eligible shareholder to make a “qualified electing fund” election (a “QEF Election”) with respect to Digital Large Cap Fund. Each of the other Products intends to take the position that it is a grantor trust for U.S. federal income tax purposes. Assuming that a Product is properly treated as a grantor trust, Shareholders of that Product generally will be treated as if they directly owned their respective pro rata shares of the underlying assets held in the Product, directly received their respective pro rata shares of the Product’s income and directly incurred their respective pro rata shares of the Product’s expenses. Most state and local tax authorities follow U.S. income tax rules in this regard. Prospective investors should discuss the tax consequences of an investment in a Product with their tax advisors.
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