



Ethereum Fundamentals: Smart Contracts, Decentralization and Financial Applications

Understanding the leading smart contract blockchain

What Is Ethereum?

Ethereum (ETH) is a smart contract blockchain that supports decentralized applications and digital assets through programmable code. While early blockchains focused primarily on peer to peer value transfer, Ethereum broadened the use of blockchain technology by enabling developers to build financial applications, marketplaces and tokenized assets directly on-chain.¹

Launched in 2015, Ethereum operates as a public, decentralized network that records and validates transactions on a shared ledger. It is widely regarded as the largest and most widely adopted smart contract platform, serving as core infrastructure for many blockchain based financial systems.¹

How the Ethereum Network Works

Ethereum processes transactions and executes smart contracts across a distributed network of validators. Following its transition to proof-of-stake, a method where participants hold cryptocurrency as their “stake” to qualify to verify blockchain transactions, the network relies on validators who commit ETH to help secure the blockchain and reach consensus on transactions.

In this role, validators process transactions, create new blocks and help maintain network security. In return, they can earn ETH network rewards in the form of additional ETH. Reward rates vary based on the total amount of ETH participating in staking on the network, among other factors.

Smart contracts—self executing programs stored on the blockchain that run automatically when predefined conditions are met—enable automated financial agreements, token issuance, decentralized exchanges and other on chain activity without reliance on centralized intermediaries.²

Key Features of the Ethereum Network



PROGRAMMABILITY

Smart contracts allow developers to build decentralized finance (DeFi) applications, digital marketplaces and tokenized assets.



DECENTRALIZATION

No single entity controls the network; transactions are validated by a distributed set of participants.



ADAPTABILITY

Ongoing network upgrades aim to improve scalability, efficiency and long term sustainability.²



ECOSYSTEM DEPTH

Ethereum supports the largest on chain ecosystem for decentralized finance, stablecoins, Non-Fungible Tokens and tokenized assets.³

¹ Ethereum Foundation, What Is Ethereum? — <https://ethereum.org/en/what-is-ethereum/>

² Ethereum Foundation, Proof of Stake and Smart Contracts — <https://ethereum.org/en/developers/docs/consensus-mechanisms/pos/>

³ DeFiLlama, DeFi Chain Rankings — <https://defillama.com/chains>

Ethereum as a Digital Asset Ecosystem

Ethereum supports a wide range of blockchain-based financial activity and applications. It is the leading platform for decentralized finance, hosting decentralized exchanges, lending protocols, derivatives applications and asset management tools.

Ethereum is also a primary network for stablecoins and tokenized assets, which are increasingly used for payments, settlement and digital representation of real world assets.⁴

The native token, ETH, is used to pay transaction fees, secure the network through staking and support on chain activity.

How Do Investors Access Ethereum?

Investors seeking exposure to Ethereum typically do so through two primary approaches:

- Direct ownership of ETH, which involves managing digital wallets, private keys and custody
- Exchange traded products, which may offer simplified access while limiting direct interaction with the network
- Each approach involves different operational, regulatory and risk considerations.⁵

Portfolio Applications

Some investors evaluate Ethereum as:

- Exposure to the growth and adoption of blockchain-based technology infrastructure supporting Web3 and financial applications
- A component of an alternatives or opportunistic allocation
- A complement to other digital assets with different network designs and use cases

As with all digital assets, Ethereum's role in a portfolio depends on an investor's objectives, time horizon, risk tolerance and liquidity needs.



Key Takeaway

Ethereum is a leading smart contract blockchain that supports decentralized financial applications, tokenization and on-chain innovation. Its programmable design and broad ecosystem help distinguish it from value-transfer-focused blockchains and traditional financial systems. Understanding these fundamentals can help investors more thoughtfully evaluate Ethereum's potential role within an evolving digital asset landscape.

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⁴ Federal Reserve Bank of New York, Stablecoins and Tokenization — https://www.newyorkfed.org/research/staff_reports/sr1170.html

⁵ Investor.gov, Crypto Assets — <https://www.investor.gov/additional-resources/spotlight/crypto-assets>

IMPORTANT INFORMATION

RISK CONSIDERATIONS

Spot Crypto are exchange-based products that track the price of an asset, i.e., bitcoin, by holding the actual asset as the underlying asset.

Blockchain is a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network.

Cryptocurrency (notably, Bitcoin) operates as a decentralized, peer-to-peer financial exchange and value storage that is used like money. It is not backed by any government. Federal, state or foreign governments may restrict the use and exchange of cryptocurrency. Cryptocurrency may experience very high volatility.

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Morgan Stanley Investment Management Inc. is the Delegated Sponsor and Foreside Fund Services, LLC is the Marketing Agent for MSSE.

This information must be preceded or accompanied by a prospectus, click [here](#) to view or download the prospectus. You should consider the Trust's objectives, risks, charges and expenses carefully before investing. The prospectus contains this and other important information about the Trust. Please read the prospectus carefully before you invest.

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The value of the Trust relates directly to the value of the underlying digital asset it holds, the value of which is highly volatile and subject to fluctuations due to a number of factors.

The Trust relies on third party service providers to perform certain functions essential to the affairs of the Trust. Some of these service providers may not be subject to federal regulation and oversight and the replacement of such service providers could pose a challenge to the safekeeping of the digital asset and to the operations of the Trust.

No guarantee or representation is made that the Trust's investment strategy, including, without limitation, its investment objectives or strategies, will be successful, and investment results may vary substantially over time. Nothing herein is intended to imply that the Trust's investment methodology or that investing may be considered "conservative," "safe," "risk free," or "risk averse."

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DIGITAL ASSET RISK DISCLOSURES

Many digital assets, including ether, have experienced significant volatility in trading prices in recent periods and may continue to experience such volatility in the future. Such volatility in digital asset prices could have a material adverse effect on the value of the Trust and the shares could lose all or substantially all of their value.

Digital assets represent a new and rapidly evolving industry. The value of the Trust depends, among other things, on the acceptance of the digital assets in general and ether in particular, the capabilities and development of blockchain technologies and the fundamental investment characteristics of ether.

Digital asset networks are developed and maintained by a diverse set of contributors and the perception that certain contributors will no longer contribute to the network or may decrease their contributions to, or involvement with the network could have an adverse effect on the market price of the related digital asset.

Digital assets may have concentrated ownership and large sales or distributions by holders of such digital assets could have an adverse effect on the market price of such digital assets.

As discussed in the prospectus, MSSE expects to stake certain of its assets in accordance with its staking and liquidity policy and, therefore, may receive staking rewards. Staking rewards can vary significantly over time and staking activity may, depending on future governance proposals on the Ethereum network, pose a risk of automatic "slashing penalties" in the event of validator misbehavior or poor performance. In the event automatic staking is implemented on the Ethereum network, there will be no guarantee that the Trust's staked assets will avoid experiencing slashing or that the Trust will recover any of its staked assets, or the value thereof. In addition, bonding and unbonding periods may limit when assets become eligible to accrue staking rewards and when they may be unstaked, withdrawn and ultimately sold by the Trust in connection with redemption and creation orders and to pay for

expenses. The length of these periods are monitored and considered as part of the Trust's staking and liquidity policy, pursuant to which MSSE expects to stake less than all of its digital assets which will reduce the potential amount of staking rewards receivable by the Trust and by extension the value of Shares.

Staking may introduce a risk of loss of ether, which could adversely affect the value of the Trust's shares if any such losses occur. Staking often includes activation and unbonding/withdrawal periods, during which ether cannot be sold or transferred and are therefore illiquid. ether Ether is generally not eligible to accrue staking rewards during staking bonding and unbonding periods. At each step in the staking process, ether may be exposed to risks such as security breaches, smart contract vulnerabilities, and validator or custodian failure or compromise, any of which could result in a complete loss of ether or associated staking rewards. There is no guarantee that the Trust will receive any staking rewards.

MSSE does not provide investors with direct exposure to spot ether, and an investment in the Trust is not a direct investment in ether. As a non-diversified and single industry fund, the value of the Trust's shares may fluctuate more than shares invested in a broader range of industries. Because the value of the Trust is correlated with the value of ether, it is important to understand the investment attributes of, and the market for, the underlying digital asset. Please consult with your financial professional.

A substantial direct investment in a digital asset may require expensive and sometimes complicated arrangements in connection with the acquisition, security and safekeeping of the digital asset and may involve the payment of substantial fees to third party service providers through cash payments of U.S. dollars. Regulation of digital assets, including ether, continues to evolve across different jurisdictions worldwide, which may cause uncertainty and insecurity as to the legal and tax status of a given digital asset. As ether and other digital assets have grown in both popularity and market size, the U.S. Congress and a number of U.S. federal and state agencies have been examining the operations of digital asset networks, digital asset users and the digital asset spot market. Many of these state and federal agencies have brought enforcement actions and issued advisories and rules relating to digital asset markets. Ongoing and future regulatory actions with respect to digital assets generally or any single digital asset in particular may alter, perhaps to a materially adverse extent, the nature of an investment in the Trust.

The Delegated Sponsor does not store, hold, or maintain custody or control of the Trust's digital assets, but instead has entered into Custodial Services Agreements with third parties to facilitate the security of its ether. The custodians control and secure the Trust's ether in segregated custody accounts to store private keys, which allows for the transfer of ownership or control of the Trust's ether on the Trust's behalf. If a custodian resigns or is removed by the Delegated Sponsor or otherwise, without replacement, it could trigger early termination of the Trust.

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Before making an investment decision in the Trust, you should carefully consider the risk factors and other information included in the Trust's prospectus.

Investors should be aware that investing in MSSE is not equivalent to investing directly in ether.

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