# Ethereum (ETH)

**Investing in digital currencies**

Ethereum is the second-largest cryptocurrency by market capitalisation, following Bitcoin. Ethereum, however, is more than just a cryptocurrency. It is an innovative open-source platform based on blockchain technology which facilitates the creation and operation of decentralised applications (dApps) and smart contracts. These applications range from interactive games to financial services such as lending.

## History

Ethereum was launched in 2015 by a group of developers led by Vitalik Buterin. Their goal was to extend the use of blockchain technology beyond simple monetary transfers and unlock its potential for decentralised applications and smart contracts. Since its inception, Ethereum has evolved into one of the leading platforms for these innovative technologies, serving as the technological foundation for many other blockchain projects and cryptocurrencies. As the use of the platform requires payment in Ethereum coins (known as Ether), this also drives demand for Ethereum.

## Technology

Like most cryptocurrencies, Ethereum is based on decentralised blockchain technology operated by a network of computers. Ethereum uses a consensus mechanism known as Proof-of-Stake (PoS) to validate transactions. In simple terms, participants in the network deposit their coins to gain the chance of being selected as a validator for the next block in the blockchain. The likelihood of selection is proportional to the number of coins deposited. The randomly selected participant earns Ethereum as a reward. The depositing of coins is referred to as staking. PoS mechanisms consume significantly less energy compared with Proof-of-Work (PoW) processes, which are used by Bitcoin and other cryptocurrencies.

| Name: | Ethereum |
| --- | --- |
| Securities number: | 39891.263 |
| ISIN: | XTD5RG2FHH04 |
| Abbreviation: | ETH |

## Special features

### Smart contracts

At the core of Ethereum are self-executing contracts stored on the blockchain, known as smart contracts. When pre-programmed criteria are met (e.g. receiving a payment in Ethereum), the agreed compensation is automatically carried out (e.g. transferring the equivalent value in another cryptocurrency).

### dApps (decentralised applications)

dApps are programmes that operate on the blockchain and can perform a wide range of functions. They are comparable to websites, but with a key difference: while websites typically connect to a server and database in the background, dApps interact with the blockchain through smart contracts. The applications range from financial transactions to social media and games.

## Use cases

### Decentralised finance (DeFi)

Ethereum is the leading platform for DeFi (decentralised finance) applications, which enable financial services such as coin trading or lending outside of the traditional financial system.

### Non-fungible tokens (NFTs)

Ethereum has enabled the creation of NFTs, which digitally represent unique assets such as artworks, collectibles and real estate. NFTs have the potential to transform our understanding of ownership and copyright in the digital age.

## Decentralised autonomous organisations (DAOs)

Ethereum also facilitates the creation of decentralised organisations, which operate like companies but without the need for centralised leadership. Instead, the management rules are immutably encoded in smart contracts. Members make decisions through votes conducted on the blockchain, which are then automatically executed by smart contracts. This structure offers potential advantages, such as transparency in decision-making, (pseudo-)anonymity for members and increased management efficiency.

## Economic aspects (tokenomics)

Ether (ETH), Ethereum's cryptocurrency, is used to pay for transactions and services within the network. As a reward for staking, it provides a key incentive for users to validate transactions on the blockchain. Unlike Bitcoin, Ethereum does not have a maximum limit on the total number of coins that can be created.

## Classification

Ethereum was designed by its developers not only as a cryptocurrency but primarily as a platform for dApps and smart contracts, offering a wide range of applications. The PoS mechanism it employs is more energy-efficient than the PoW mechanism. Unlike Bitcoin, an unlimited number of Ether can theoretically be generated. The rate at which this happens, however, is regulated by the network to prevent an oversupply.

## Links

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