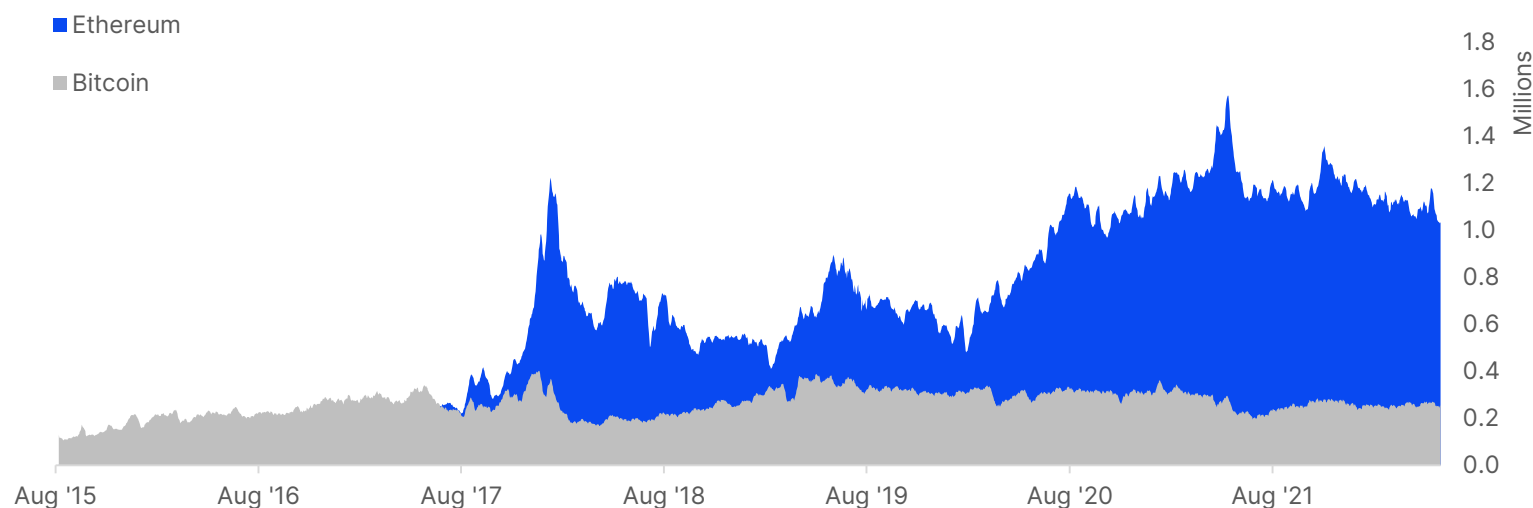


WHAT IS ETHEREUM?

Ethereum was launched in 2015 by programmer Vitalik Buterin as a technology that grew upon Bitcoin's original ideas. While similar to Bitcoin in its ability to transfer value without a central intermediary, Ethereum is different in that it allows developers and entrepreneurs to build applications with the use of smart contracts. Developers and users can create, build, and monetize applications built on Ethereum, with ether (ETH) as the native token that powers the blockchain. As the base layer for the next iteration of the internet labelled Web 3.0, Ethereum is now the second largest digital asset and the largest smart contract platform by market capitalization (\$200 billion+).^[1]

DAILY TRANSACTIONS

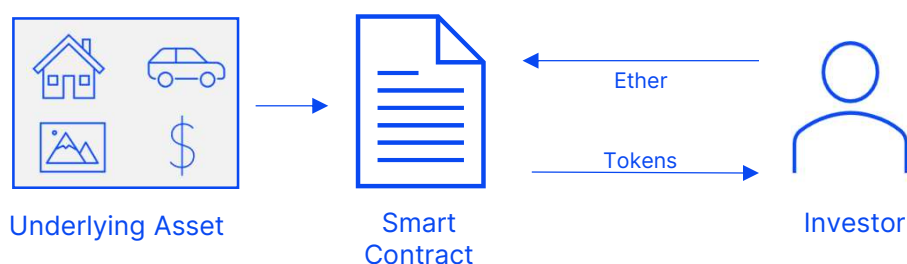
Source: Glassnode, Eaglebrook Advisors



What are Smart Contracts?

Smart contracts are programs that execute transactions and contracts when predetermined conditions are met, using if/then logic to transfer ether, digital assets, and data. They are written as a code that is both transparent and publicly available on the Ethereum ledger. An example of a smart contract is, "if Bob has 100 Apples, then Alice will pay Bob 1 ETH". When the smart contract confirms that Bob has deposited 100 Apples, the transaction will automatically execute and settle instantly, and Alice will pay Bob 1 ETH. Another example is, "if Bob pays 10 ETH, send him a token that represents the title of the car." Here, the smart contract is storing data and sending value and ownership as warranted, through tokenization.

Smart contracts are fully automated and transparent with much greater efficiency than traditional financial contracts or value transfers. This enables developers to build products and applications that were previously not possible.



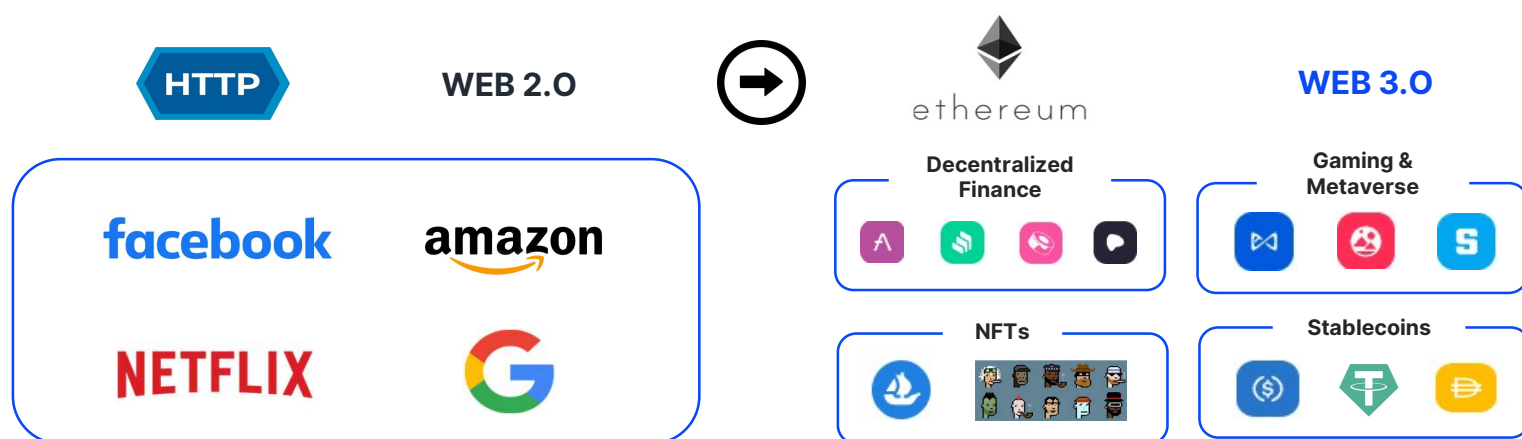
WHAT IS ETHEREUM?

Ethereum as a Platform

Companies, developers, and entrepreneurs can build software applications on top of Ethereum as the base layer protocol (layer one). Ethereum is comparable to the internet protocol HTTP, the standard platform and protocol for websites and web browsers that was developed in 1989. In the first wave of the internet, companies such as Amazon, Netflix, Facebook, and Google built their applications on HTTP as the base layer. In the second wave of the internet, companies such as Instagram and Uber built their applications on mobile, using iOS and Android as the base layer. Now, the third wave of the internet has the world's leading developers and entrepreneurs building applications on Ethereum as the base layer platform, with over 1,500 applications to date.^[2]

The major difference is that Ethereum offers investors and users the opportunity to take part in the growth of the protocol with the native asset ether (ETH). In another analogy, one can think of Ethereum as the highway, applications as cars, and ether (ETH) as the gas that powers the cars. As each application requires ether to run, their usage is a significant driver of ether demand.

The major advantages of building applications on Ethereum is that apps are decentralized and permissionless with value transfer that is fully automated. Because of this, top developers, engineers, and wall street talent are now building decentralized applications across various markets such as finance, banking, payments, gaming, and art. These applications are gaining adoption from both traditional crypto users as well as newcomers interested in these opportunities. Because Ethereum is decentralized and permissionless, anyone with an internet connection can access these applications.



The Platform for Stablecoins (Payments)

Stablecoin applications are built on Ethereum and allow users to transfer value at rates that are expected to be the same in the future. While stablecoins come in various forms such as fiat-backed, debt-backed, and algorithmic, fiat-backed stablecoins are the most popular. These protocols peg assets to fully backed reserves such as fiat currencies or gold to maintain a stable value against their collateral. In these applications, users deposit dollars and receive equal amounts of stablecoins in exchange. These tokens can move freely throughout the Ethereum ecosystem and can be returned to the application for conversion back to dollars.

This development has allowed users, developers, and traders the ability to transact through Ethereum with stability. Ethereum users can send and receive payments with stablecoins, while traders can move in and out of positions within the ecosystem. Users can lend stablecoins to receive income or use them as collateral to borrow a set amount for either payments or leveraged exposure. Stablecoins have approximately \$160 billion in market capitalization^[3], with USDT, USDC, BUSD, DAI, and GUSD among the most popular.

WHAT IS ETHEREUM?

The Platform for DeFi (Finance & Banking)

Stablecoins provided a platform of stability for the next step in the Ethereum ecosystem, decentralized finance (“DeFi”). DeFi leverages Ethereum-based tokens and smart contracts to create applications that offer traditional financial services without central intermediaries. The front-end of these applications are internet webpages, while the back-end processes through Ethereum. Ethereum as the base layer protocol provides an efficient, transparent, and permissionless offering of banking and money services. Primary applications within DeFi involve borrowing, lending, exchanging, derivatives, and insurance.

Through decentralized exchanges, one can swap between tokens or provide liquidity to other traders and receive transaction fees. Through lending and borrowing protocols, users can deposit assets, receive interest, and borrow other assets for either trading or payments. Derivative protocols allow users to gain exposure to synthetic assets tied to traditional financial indices, commodities, or US stocks, while others provide custom over-the-counter contracts between two parties. Insurance protocols allow users of the DeFi applications to pay for coverage against bugs or attacks. DeFi applications are built to interact with each other, creating an ecosystem that is interoperable and accessible to anyone in the world with an internet connection.

As each transaction through a DeFi protocol requires ether (ETH), these applications are a significant driver of ether demand. Over 4.5 million unique addresses have accessed DeFi protocols thus far^[4], with over \$100 billion deposited into DeFi protocols on the Ethereum blockchain^[5].

The Platform for NFTs (Gaming & Art)

Non-Fungible Tokens, or “NFTs” are digital assets that represent art, music, games, or videos. Each NFT is a unique, one-of-a-kind asset with ownership that is verified on the blockchain. When NFTs are transferred, ownership is transferred - making each NFT an exclusive opportunity.

Examples of NFTs include CryptoPunks (scarce, generative digital art), Athletes (game highlights), Top Shot (digital basketball cards), and Beeple (artist of NFT that sold for \$69.4 million). Games on Ethereum also have NFTs available, with players battling to own the most exclusive goods or parcels of digital land.

The opportunities of NFTs go beyond art. NFT’s are a way to verify ownership. Some NFTs have exclusive rights to conferences, access to CEOs, or other built-in utilities. NFTs also allow for “tokenization” or the sharing of value through token holders. Tokenization use-cases are emerging in shared real-estate ownership or shared fine art, to name a few.

What’s Next for Ethereum? The Merge.

Since creation, Ethereum has held a “proof-of-work” consensus mechanism, like Bitcoin, which uses miners to validate and confirm transactions for block rewards. While proof-of-work is a great mechanism for bitcoin as a digital gold, Ethereum (a platform for the new internet labelled Web 3.0) may find more scalability through proof-of-stake. In short, “stakers” post ether as collateral, vote to approve transactions, and receive rewards for doing so. Key benefits of Ethereum’s merge:

- + ~99% less energy use than proof-of-work, making Ethereum ESG-friendly
- + Improved scalability as transactions are approved without complex equations
- + Reductions in new issuance and the potential deflationary supply with EIP-1559’s buyback
- + Staked ether (in hot validators) receive staking rewards as a form of cash-flow and income

While the merge introduces some execution risk, the resulting benefit will be a significant improvement to Ethereum.

[1] Source: Glassnode, Eaglebrook Advisors

[2] Source: Dapp.com, Eaglebrook Advisors

[3] Source: CoinMarketCap, Eaglebrook Advisors

[4] Source: Dune Analytics, Eaglebrook Advisors

[5] Source: DefiLlama, Eaglebrook Advisors

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Economic Risk: The economic risk associated with digital currency is in the lack of widespread or continuing digital currency adoption. The market and investors could decide that digital currency should not be valued at the current market capitalization due to a variety of factors.

Regulatory Risk: Digital currency could be banned or highly regulated by governments that would deter investors from buying or holding digital currency.

Technical Risk: Digital currency is a dynamic network with a codebase that is updated to add new security and functionality features. The updated code that is merged by the core developers could potentially have an error that threatens the security or functionality of the digital currency network.

Cybersecurity Risk: Digital currency exchanges and wallets have been hacked and digital currency has been stolen in the past. This is a potential risk that clients must be comfortable with when investing and holding digital currency. Theft is less likely when holding digital currency at a qualified custodian in offline systems (cold storage) with institutional security and controls.

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