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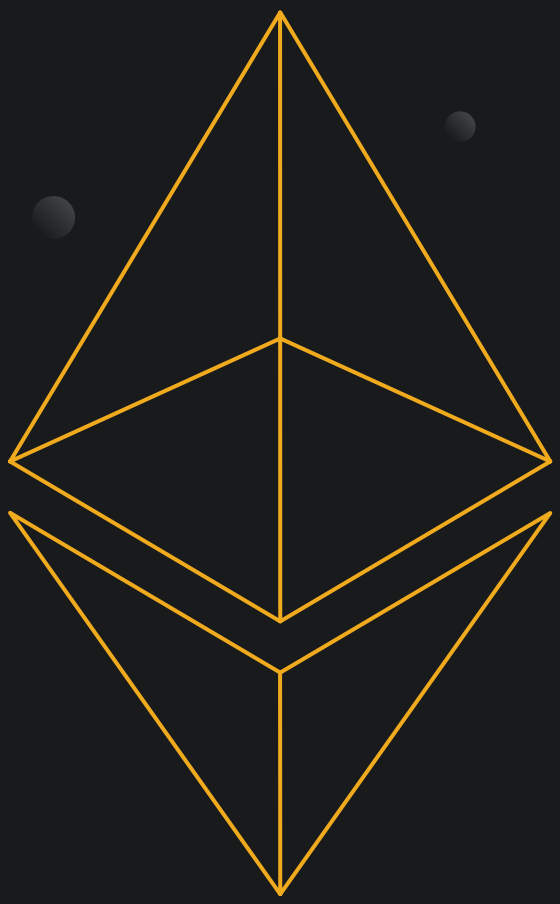
Investment Thesis
Ethereum and Decentralized Finance

In this report we will explain why Ethereum is such a promising cryptoasset by first explaining how it works and exploring the most important areas of Ethereum — including Decentralized Finance (DeFi). Ethereum stands out as the crypto asset with the most promising roadmap because of its developers' intentions and relentless efforts to roll out a new version of its blockchain—dubbed "Ethereum 2.0". We believe that the asset presents the most attractive investment opportunity of this decade.

DATA AS OF NOVEMBER 10 2020



Ethereum Investment Thesis

Executive Summary

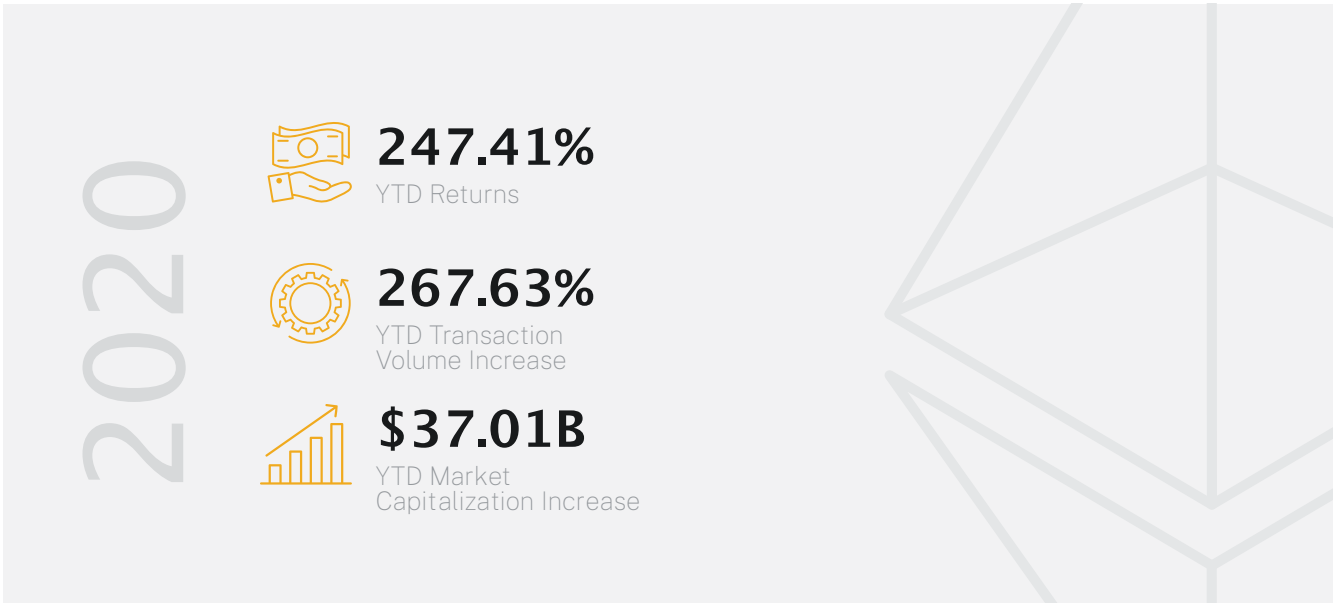
Ethereum represents the largest single innovation within the cryptoasset and blockchain industry since the creation of Bitcoin in 2009. While Bitcoin was the world's first decentralized, peer-to-peer digital currency and is considered the world's first digital gold, Ethereum was the first form of programmable money — that is, a cryptoasset which allows developers and entrepreneurs to code financial assets like they would for computer programs. Ethereum's key feature is smart contracts, which are computer programs that exist on a blockchain and allow users to program financial assets.

In this report we will explain why Ethereum is such a promising cryptoasset by first concisely explaining how it works and exploring the most important areas of Ethereum — including Decentralized Finance (DeFi). Ethereum stands out as the crypto asset with the most promising roadmap because of its developers' intentions and relentless efforts to roll out a new version of its blockchain — dubbed "Ethereum 2.0". We will show how Ethereum 2.0 will usher in a new era of sustainability through the use of Proof of Stake whilst scaling the amount of transactions possible to eventually reach 10,000 per second.

Ethereum Key Metrics	As of November 10 2020
Ticker	ETH
Price (USD)	$449.82
Circulating Supply (BTC)	111,993,765 ETH
Market Capitalization (USD)	$50,377,035,452
Block Reward (ETH)	2 ETH

Figure 1: ETH Key Metrics (Source: CoinGecko)

Figure 2: ETH 1-Year Historical Performance (Source: CoinMetrics)



Ethereum Investment Thesis

How Ethereum Works

Smart Contracts

As mentioned, the key innovation behind Ethereum is its smart contracts. Smart contracts are self-executing contracts between different users which represent an agreement over assets on the Ethereum blockchain. This contract is represented as code encoded into the Ethereum blockchain. Smart contracts are important as they allow for users to create complex financial instruments and contracts which are self-enforcing and exist on a decentralized blockchain. As a result of this invention, users and engineers are easily able to make unique financial instruments in the form of tokens, fundraising agreements, lending and market making platforms which exist on the Ethereum blockchain in a public and transparent way. The value of Ethereum in the long-term is likely to be tightly coupled to demand for smart contracts. Since Ethereum's launch in 2015, the platform has seen a pronounced evolution of the types of smart contracts deployed on Ethereum. For example, in 2017 the crypto asset bubble was, to a large extent, driven by the boom in issuance of initial coin offering (ICO) smart contracts, whereas since 2019 a variety of decentralized finance applications, such as stable coins, lending, and market making, have been the primary growth area within smart contract development.

Ether

Integral to the crypto asset's success is Ether, the underlying currency which drives the Ethereum blockchain. Within this primer we use the terms Ethereum (the network and blockchain) and Ether (the native currency) interchangeably, but Ether is the currency used to pay for transactions on the Ethereum blockchain and used to issue smart contracts. Users who wish to execute smart contracts and engage with financial contracts on Ethereum must pay for such transactions with Ether, which means that demand for smart contracts is closely related to demand for Ether. In addition, a number of smart contracts require Ether to be deposited in order to fulfil their functions — for example, decentralized lending or stablecoin platforms on Ethereum often require investors to deposit Ether as collateral. The crypto asset can be seen as analogous to the role that oil plays within the global economy in that increasing globalization and economic integration led to oil becoming a more demanded resource. As we will discuss later, the role of Ether will change slightly as Ethereum transitions from using Proof of Work mining to using Proof of Stake — where mining uses deposits of Ether rather than hash power and electricity. This fact will likely drastically impact Ether's role in the network.

Figure 3: Performance of Ethereum Since Inception (Source: CoinMetrics)

Ethereum Investment Thesis

Decentralized Finance

The closest analogy to investing in Ethereum is if Silicon Valley had a token representing the value in supporting the functioning of their ecosystem for startups to succeed in solving crucial problems. Potentially, Ethereum's total addressable market (TAM) includes all the industries that could build services and products on the Internet — but financial applications are the most dominant on Ethereum. Decentralized Finance, also called DeFi, is the sector combining all these financial applications. They offer original use cases, such as enabling users to store and send cryptoassets or to borrow, earn interest and invest without a bank. It's important to note that these applications are non-custodial, meaning that the cryptoassets are stored on the Ethereum blockchain and therefore controlled by users. All great innovations solve real problems, and Ethereum is no exception. With the current macroeconomic landscape of zero-to-negative interest rates and the lack of transparency in the traditional financial system, the DeFi applications brought to the market try to solve these issues. They can be regarded as part of the building blocks of the third wave of the web, from centrally owned and managed applications, to applications built on decentralized protocols. Since the start of this year, the DeFi ecosystem has experienced a massive growth with almost 200 startups, billions of dollars' worth of value transferred, and is disrupting markets such as trading, lending, remittances and more. This innovation provides 24/7 availability, auditability and transparency, and is also reducing censorship, costs and certain counterparty risks. But none of this would be possible without Ethereum and therefore Ether is the second largest cryptoasset in the world with a daily trading volume of $13 Billion — which is 41X that of the next competitor — alongside over 1 million transactions processed on the Ethereum blockchain. On the next page you'll find examples of Defi upstarts alongside key fundamental metrics.

Ethereum Investment Thesis

Decentralized Finance

Figure 4: Overview of Decentralized Finance projects (Source: DeFi Pulse))

UNISWAP

Definition: A decentralized exchange (DEX) for Ethereum-based tokens with peer-to-peer liquidity providers.

Key Metric: Uniswap, had a higher 24-hour trading volume than Coinbase for the first time ever, topping $400M in September 2020.

TETHER

Definition: A cryptoasset or also called a stablecoin or cryptodollar of which the value is pegged to the US dollar. 1 Tether (USDT) is equivalent to 1 US dollar.

Key Metric: In September, Tether processed $3.55 billion in daily transfer value vs. in Q2 2020, PayPal did just $2.94 billion daily.

WRAPPED BTC

Definition: Wrapped Bitcoin (WBTC) is the first ERC20 token backed 1:1 with the price of Bitcoin.

Key Metric: WBTC is traded on various DEXes. As of mid November, $1.9 billion worth of Bitcoin circulate on the Ethereum blockchain for various use cases such as permissionless trading or earning interest on WBTC deposits.

YEARN FINANCE

Definition: An automated asset management platform switching across lending platforms for better yields.

Key Metric: As of mid November, Yearn Finance has over $350 million of assets under management.

SYNTHETIX

Definition: A decentralised synthetic asset issuance protocol for various kind of assets such as fiat currencies, commodities, cryptoassets and stocks.

Key Metric: As of mid November, nearly $600 million worth of assets has been issued on Synthetix.

MakerDAO

Definition: A decentralized autonomous organization (DAO) behind the stablecoin, Dai — whose value is pegged to the US Dollar and kept stable through a framework of aligned financial incentives using ERC20 tokens including Ether as collateral.

Key Metric: In mid November, the DAO has over $2 billion in AUM.

Ethereum Investment Thesis

Key Quotes

“ Let me just basically say how impressed I am by Ethereum, full stop, period.”

Heath Tarbert

COMMODITY FUTURES TRADING COMMISSION (CFTC) CHAIRMAN

“I’m very excited about the potential that DeFi offers in principal. The idea that anyone anywhere in the world can have access and choose their financial exposure is a very powerful thing.”

Vitalik Buterin

CO-FOUNDER, ETHEREUM

“Make no mistake - Ethereum would never have existed without Bitcoin as a forerunner. That said, I think Ethereum is ahead of Bitcoin in many ways and represents the bleeding edge of digital currency.”

Fred Ehrsam

CO-FOUNDER, COINBASE AND CO-FOUNDER, PARADIGM

“The goal of DeFi is to reconstruct the banking system for the whole world in this open, permissionless way. You only get that shot every 50 years.”

Alex Pack

MANAGING PARTNER, DRAGONFLY CAPITAL

“[Ethereum 2.0] is the natural extension of the Ethereum 1.0 platform. It will be realized as a separate network, but there will be a smooth evolution from Ethereum 1.0, both in terms of developer experience and in terms of how activity will flow ...”

Joseph Lubin

CO-FOUNDER, ETHEREUM AND FOUNDER, CONSENSYS

Ethereum Investment Thesis

The Future of Ethereum

Ethereum stands out in the cryptoasset industry for having an especially ambitious roadmap which can be bifurcated into two key developments: Ethereum's transition to Proof of Stake and its roll out of Sharding — collectively dubbed Ethereum 2.0. As we've mentioned, Ethereum uses a similar Proof of Work mining to that of Bitcoin and therefore it has the same environmental issues associated with the energy-intensive mining process for appending new Ethereum blocks to the blockchain. The Ethereum development team has planned an alternative system called Proof of Stake where, instead of miners spending electricity and hashpower to mine blocks, miners are randomly allocated blocks in proportion to the amount of Ether they have deposited into the system. Proof of Stake therefore replaces electricity expenditure for capital (Ether) deposits, a process which is considerably more environmentally friendly. Sharding is an attempt to improve Ethereum's transaction throughput (in the order of 1000x) by separating the Ethereum blockchain into separate parts, called shards, and only making a certain number of miners mine blocks in any shard. This will theoretically allow Ethereum's miners to mine blocks at a much higher rate on average without compromising on security. Ethereum's long-term success is contingent on the successful rollout of Sharding and Proof of Stake, and we can expect the first aspects of both to be launched this year.

We'll now expand on the three key elements of the future of Ethereum — Layer 2.0 scalability efforts, Ethereum 2.0, and EIP-1559.

Layer 2.0 Scalability Efforts

Ethereum is making efforts to improve the ability of Ethereum to handle a larger throughput for transactions, at a cheaper price for users, through Layer 2.0 initiatives. This term refers to technologies that are built on top of Ethereum's base protocol, which allows for improved scalability of the Ethereum blockchain without reducing its economic security. In the footnotes[1] we list a few examples of Layer 2.0 technologies either already built on Ethereum or currently being built. There are several sidechains and payment channels implementations live on Ethereum currently, such as xDai. In addition, it is likely that the more-promising Layer 2.0 solutions ZK-based (such as ZKSync) and Optimistic Rollup, will launch and be implemented by various developer teams over the next 3-6 months. These two phenomena will help improve Ethereum's transaction throughput significantly, even if they do not totally remove the bottleneck. Given this, the success of Layer 2.0 technologies is likely to have a positive impact on the short-to-medium-term prospects of Ethereum by improving the ability of existing users to use the blockchain and help Ethereum's DeFi ecosystem compete with alternative financial products built on Ethereum such as the existing centralized exchange infrastructure (e.g. Binance, Coinbase).

Ethereum Investment Thesis

The Future of Ethereum

Ethereum 2.0

Ethereum 2.0 (ETH 2.0) is the next step of the Ethereum network and blockchain. The move from Ethereum 1.0 to Ethereum 2.0 will be released in multiple phases, starting with Phase 0 which is likely to be rolled out in Q4 2020 with Phase 1 and 2 (at the very least) to follow. Each phase will attempt to improve the performance, scalability, and sustainability of the Ethereum network. Ethereum 2.0[2] is different from the current Ethereum network in two ways: **Proof of Stake** and **Sharding**.

Proof of Stake: Ethereum runs on a consensus mechanism called Proof of Work (PoW) which uses computing power and electricity for miners to build and approve blocks on the blockchain. In contrast, Proof of Stake (PoS) is an upgrade which will improve scalability and sustainability. Instead of using physical mining which expends electricity, PoS users are stakers that deposit Ether and then are chosen to process transactions and validate blocks in proportion to the size of their deposits. This can lead to scalability improvements and requires much less electricity.

Sharding: Sharding is a scalability effort that seeks to improve the ability of the Ethereum blockchain to handle a greater number of transactions. Sharding is a process through which the Ethereum blockchain is "split" into many different sub-nodes or sub-blockchains. This makes it easier for different blocks of transactions to be processed at the same time rather than sequentially. Ethereum 2.0 Sharding can be understood as a multi-lane approach for a blockchain as opposed to a single-lane approach, as for Ethereum 1.0, Bitcoin, and others.

EIP-1559

EIP-1559 is a proposal to upgrade the economics of how users pay transaction fees on Ethereum. It has been lauded by some as "the final puzzle-piece to Ethereum's monetary policy". In short, the protocol upgrade intends to make the flow of transactions fees on the Ethereum network more predictable and to more closely tie the value of Ether to the demand for transactions on its blockchain. The changes would burn a certain amount of Ether on a per transaction basis whilst adjusting the burned amount in order to allow users to more accurately predict how much they will pay in transaction fees over time. The means that the fee burn would respond dynamically to demand for the Ethereum network. In addition, this change would create a deflationary pressure on Ethereum's supply, which would further increase when demand for transactions and smart contracts increases, and then decrease when demand for the network decreases. This deflationary pressure will have a positive impact on Ether's valuation, assuming demand for the cryptoasset remains the same.

Ethereum Investment Thesis

Risks

In this section we zero in on one of the most quintessential elements to take into consideration when valuing cryptoassets, that is, the underlying risks. This section is not exhaustive, since as the industry matures some risks may be mitigated to some extent while others might come into the spotlight more sharply. We categorized the risks based on third party involvement, their impact on market participants and on Ethereum as the settlement layer for financial applications. We describe three categories of risks associated with DeFi and Ethereum — technological, regulatory, and financial risks.

Technological Risks

Bugs, hacks or implementation failures not only present a major impediment to mainstream adoption of DeFi, they also slow down the potential value brought to Ether going forward. In this section we cover the main technological risks associated with both Ethereum and DeFi applications.

Smart Contract Loopholes and Hacks: Hacks originating from smart contract loopholes are the Achilles' heel for adoption, especially when they result in permanent loss of user funds. This fear can haunt risk-averse users and entrepreneurs alike, and could prevent them from using certain crypto services or even drive them to capitulate. For example, in 2016, the DAO, a popular project launched on Ethereum and built by the team behind the now-defunct startup Slock. It raised over $100 million worth Ether of which 3.6 million Ether were stolen by an unknown attacker. As of November 2, 2020, with the price of ETH trading at $390, this represents over $1.4 billion of investors' money lost. At the time of the theft, the price of ETH went down to $12 from a high of $20, a 40% drop. It's worth noting that the hack didn't relate to the Ethereum blockchain per se, and hence didn't affect users' funds held on the blockchain.

This situation is also relevant for the DeFi applications — the hacks of Harvest Finance and Eminence are other examples among many that happened this year. To mitigate these risks, DeFi upstarts conduct third-party smart contract audits

Network Congestion: The unprecedented growth in total value locked (TVL) in DeFi of over 1,500% has led to excessive amounts paid by users in gas fees surpassing what one would pay to make international payments with Western Union. As a reminder, gas fees make up the payment in ETH to use the Ethereum platform. As such, rising fees present the perfect opportunity for Ethereum competitors and off-chain solutions to flourish, which in turn leads to user and entrepreneur brain drain from Ethereum to other solutions. Blockchains like Ethereum are victims of their own success, given the fact that they have scalability limitations. With the long-planned upgrade to the Ethereum network — ETH 2.0 — not happening overnight, this may well leave room for competition to take market share from Ethereum going forward.

Ethereum Investment Thesis

Risks

Regulatory Risks

Despite decentralization and individual sovereignty making up the ethos of Ethereum and the Web 3.0, regulatory actions are still possible for qualified instances such as securities law or criminal violations. These are conducted by various government agencies in the US such as the Securities Exchange Commission (SEC) or even the Department of Justice (DOJ). DeFi applications, along with the masterminds behind them, have no legal immunity. In this section, we delve into a non-exhaustive list of various federal laws and regulations that might apply to DeFi upstarts and entrepreneurs, and present concrete examples of previously pursued regulatory crackdowns on crypto projects. It is important to note that this material does not represent legal advice and should not be relied on or treated as a substitute for specific advice relevant to particular circumstances and is not intended to be relied upon by anyone in making or refraining from making specific decisions.

Securities Laws: Two years ago, William Hinman, director of the SEC's division of corporation finance, confirmed that Ether was not considered a security under federal securities laws. This means that the cryptoasset is available anywhere in the world provided crypto venues offer ETH trading, and hence the cryptoasset is not subject to more stringent rules than Bitcoin as the latter is not qualified as a security either. Such rules could have resulted in restrictions to trade Ether on exchanges operating in the US that are unregistered with the SEC and prohibition to launch mainstream financial products for Ether — such as exchange-traded products (ETPs) or derivatives — by unregulated issuers. But jurisdictions across the globe take different approaches: for instance, in the UK, the sale of crypto-centric derivatives such as options, futures and ETPs are banned for retail investors by the Financial Conduct Authority (FCA), the UK regulator.

"*Putting aside the fundraising that accompanied the creation of Ether, based on my understanding of the present state of Ether, the Ethereum network and its decentralized structure, current offers and sales of Ether are not securities transactions.*" — William Hinman

In the same vein, the developers behind decentralized exchanges could face prosecution if their service is found to be unregistered with the SEC while facilitating the exchange of security tokens. The founder of EtherDelta is a great example of such an instance. Zachary Coburn was charged by the SEC for operating an unregulated securities exchange in violation Section 5 of the Exchange Act — specifically due to the fact that the order book was maintained in a centralized server rather than on the Ethereum blockchain. Without admitting or denying the findings, Coburn consented to the order and agreed to pay $300,000 in disgorgement plus $13,000 in prejudgment interest and a $75,000 penalty.

Ethereum Investment Thesis

Risks

Regulatory Risks

Bank Secrecy Act: The Bank Secrecy Act (BSA), a federal law, was created in the 1970s with the aim of conducting financial activity surveillance on clients of financial institutions to prevent money laundering alongside the financing or facilitation of other illegal activities. This law obligates financial institutions such as crypto exchanges that serve US customers (even without a physical presence in the US) to implement know-your-customer checks and report certain customers' information and transactions to the Financial Crimes Enforcement Network (FinCEN). Suspicious transactions also have to be submitted in the form of Suspicious Activity Reports or SARs to alert law enforcement. According to the recent guidance published by FinCEN, decentralized exchanges and their developers may be exempt from this requirement provided they have created an interface to match buyers and sellers in a peer-to-peer fashion, hence without maintaining the order book in a server a la Ether Delta nor holding customers' funds. It is not a coincidence that DeFi services have experienced an exponential growth in usage after the publication of this guidance: regulatory clarity fosters innovation from talented entrepreneurs equipped with a competent compliance team.

Financial Risks

Impermanent Loss: Decentralized exchanges (DEXs) that specifically rely on Automated Market Makers (AMMs), make up the most dominant sector in terms of dollar amounts allocated in DeFi. They account for over 93% of the DEX market share and are specifically designed without the type of order books usually maintained by a centralized exchange or a traditional Wall Street market maker. They function solely on the liquidity allocated by the users, also called liquidity providers (LPs) as they permit market participants to trade and swap ERC-20 assets. It's important to remember as we move through this section that providing liquidity to a decentralized exchange is also referred to as liquidity mining or staking. Although the disintermediation of a central authority alongside the automation of market making are some of the most noteworthy innovations brought about by DEXs such as Uniswap, there are risks specifically associated with liquidity mining — namely impermanent loss (IL). In a nutshell, LPs earn revenue with trading fees in a liquidity pool hosted by a DEX where this pool represents a trading pair such as ETH/USDT.

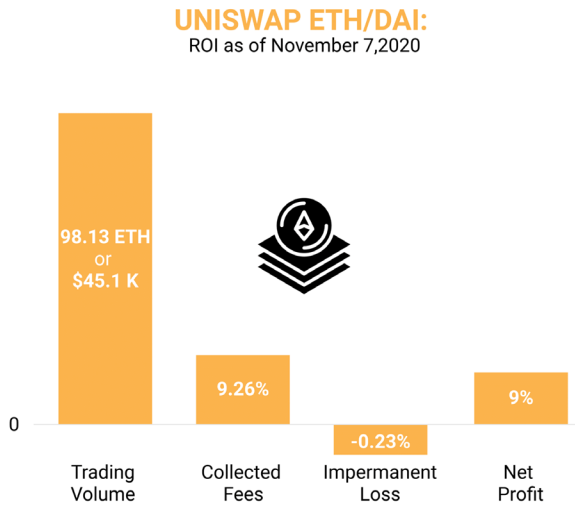
Ethereum Investment Thesis

Risks

Financial Risks

Below is an overview of the Uniswap mechanism. The issue with this design is the fact that cryptoassets are by nature highly volatile, which historically has resulted in price discrepancies between DEXs like Uniswap and traditional crypto exchanges such as Coinbase — paving the way for arbitrage opportunities for traders. This arbitrage has often come as a detriment to LPs, especially where a cryptoasset is underpriced on a DEX versus other trading venues. This means that the liquidity provision strategy could noticeably underperform a buy-and-hold strategy — especially for uncorrelated crypto pairs as experienced by LPs in the pool LINK/ETH in the midst of the large bull run of the cryptoasset LINK. Impermanent loss represents a major impediment to mainstream adoption especially for investors willing to earn passive income on their cryptoasset holdings, and delays mainstream adoption from which value could accrue to Ether. But the top liquidity pools on Uniswap, such as ETH/DAI, have been very profitable, returning over 24% since inception as of November 1, 2020, as you can see below. Despite these flaws there have been solutions which limit these issues for specific niches, such as stablecoin trading.

Figure 5: Analysis of Uniswap liquidity provider pool returns (Source: UniSwap)



Ethereum Investment Thesis

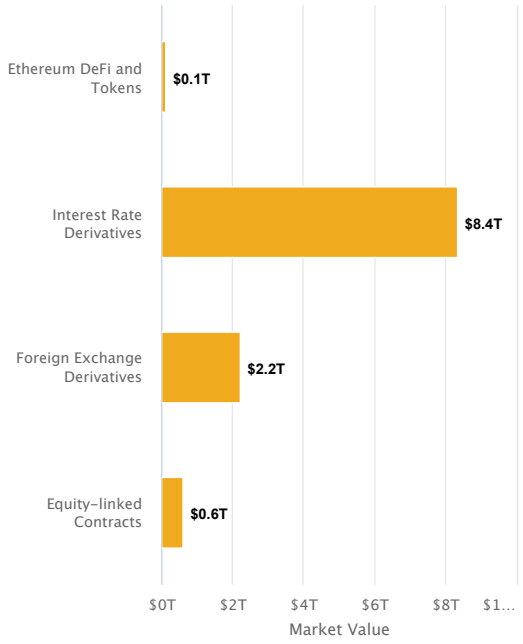
Valuing Ethereum

The closest analogy of investing in Ethereum — is having ownership in the entire Silicon Valley ecosystem where companies solve substantial problems with billions of dollars addressable markets. And investors across the world have recognized the considerable value of Ethereum with an exponential growth in its price of over 180% since January and a performance surpassing 200% since the wake of the COVID-19 pandemic. In this section, we'll touch on three different valuation models which gives us a good sign of an appropriate Ethereum valuation — market sizing, transaction fee multiples, and total value locked and yield comps.

Market Sizing

Using market sizing we can get a good impression of the potential total addressable market Ethereum has as a settlement layer for decentralized finance and other applications we've already mentioned. We can compare the value of the tokens (Ether excluded) and DeFi-based financial instruments that are issued on the Ethereum network to the notional value of global interest rate and foreign exchange derivatives. As of October 21, the estimated value of all tokens, products, derivatives, and currencies on Ethereum can be estimated to be around $54 billion. Compare this to derivatives; for example, for equity-linked derivatives, their gross market value sits at more than half a trillion dollars — many magnitudes larger than that of Ethereum's products. The differences are even more staggering for interest rate and foreign exchange derivatives as the chart on the right shows.

Figure 6: Ethereum market sizing using derivatives market. (Source: BIS, CoinMarketCap, DeFi Pulse)

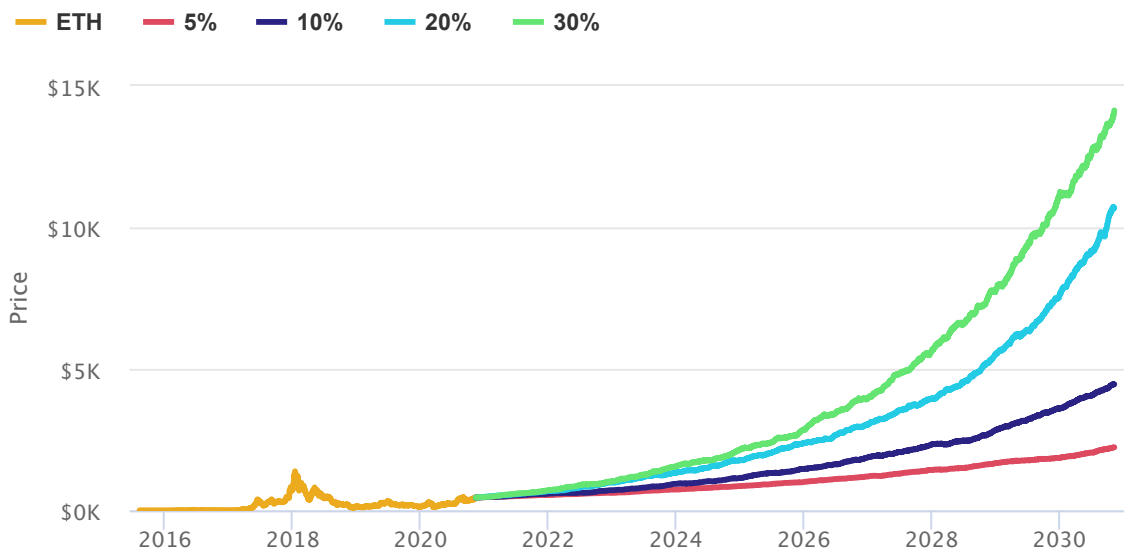


Ethereum Investment Thesis

Valuing Ethereum

We can view the gross market value of these derivatives markets as benchmarks for the potential value that Ethereum could capture in the long term. If we do, we can see that Ethereum could easily capture between at least six and over 150 times more value from the existing derivatives markets — and this says little of the new value the platform will continue to create in the form of new areas such as predictions markets. It is unarguable that the price of Ether is closely tied to the value of the assets built on top of it. Ether currently trades at a 0.86 multiple to the amount of assets issued on top of the Ethereum blockchain, not including itself. Therefore, we have simulated potential prices of Ether in the long-term if that 0.86x multiple were to remain and Ethereum were to capture 5%, 10%, 20%, and 30% of the equity-linked contracts market by 2030 — whist inserting randomness into the calculations to add to their realism.

Figure 7: Ether price projections (Source: CoinMetrics, 21Shares)



Ethereum Investment Thesis

Valuing Ethereum

Transaction Fee Multiples

Ethereum stands out as the blockchain which generates the most amount of "revenue" in the form of transaction fees distributed to the miners within its network. For example, Ethereum's Annualized Protocol Revenue is over $580M and similar to that of Bitcoin. The revenues of a protocol are both an indicator of the organic interest in the network, and a sign into the health of the blockchain's underlying economy. If miners can generate sizable and consistent revenues, this will only strengthen the security of the network. In addition, that users will spend such transaction fees shows the fundamental interest in a platform like Ethereum.

We're able to plot the Price-to-Revenue (PR) multiples of various cryptoassets, which helps show that — when considered value as a function of network revenue — Ethereum is relatively undervalued compared to Bitcoin and some of its other noticeably competitors such as Tezos, Cosmos, Polkadot, and Binance Coin. In the chart below, a lower Price-to-Revenue ratio shows that the crypto asset is relatively undervalued compared to others. As the chart above shows, Ethereum currently trades at a 89.4x PR multiple compared to 469.9x for Bitcoin and over 32,000x for Tezos. If Ethereum were to trade at the multiple of Bitcoin, its current price would be around $2,363.20 and its total market capitalization would be over $260B — a comparable level to Bitcoin.

Figure 8: Annualized Protocol Revenue Comparison (Source: Token Terminal)

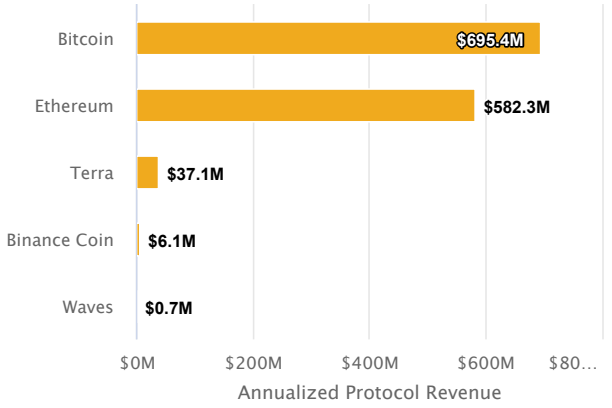
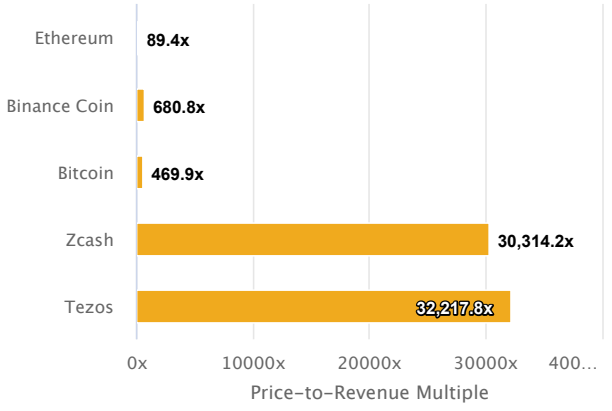


Figure 9: Price-to-Revenue multiple comparison (Source: Token Terminal)



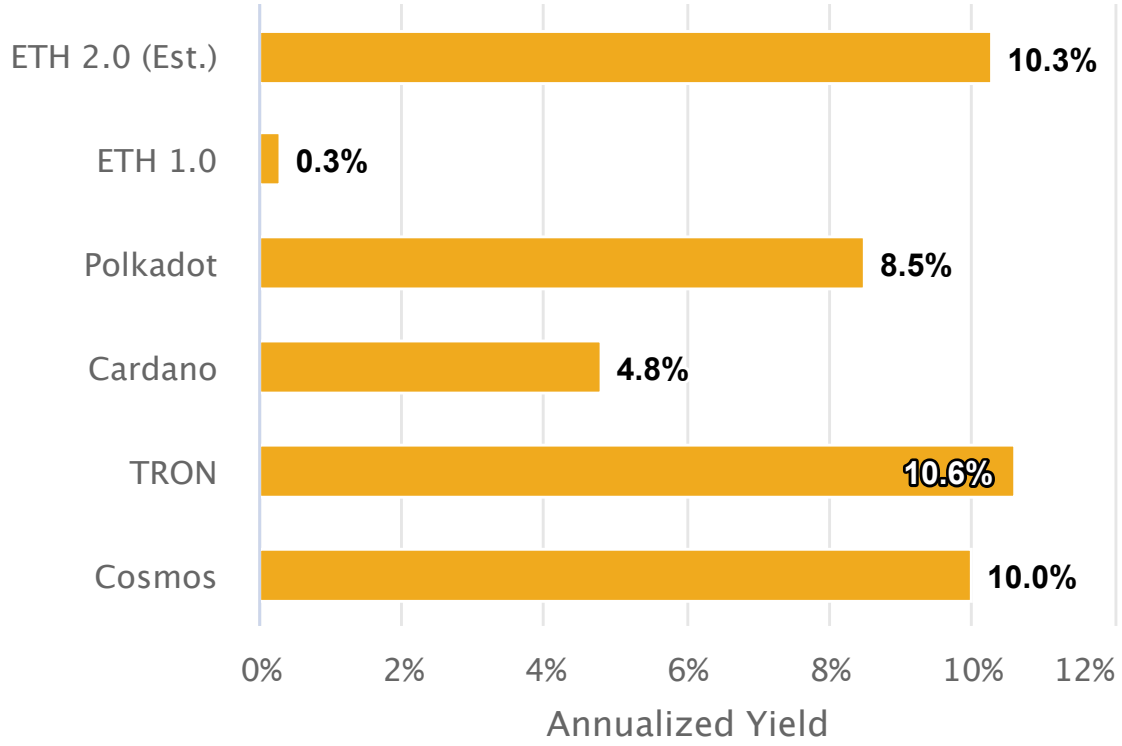
Ethereum Investment Thesis

Valuing Ethereum

Ethereum Locked and Yields

Ethereum 2.0 will be a fundamental driver of the value of Ether given the fact that it will allow investors in the asset class to generate yields on their investment by staking on the network. Currently, the yields available in Ethereum 2.0 are estimated to be between 5-10% which, given the large amount of investors in Ethereum and the size of the asset, would cause investors receiving yields incomparable to what is available in traditional capital markets.

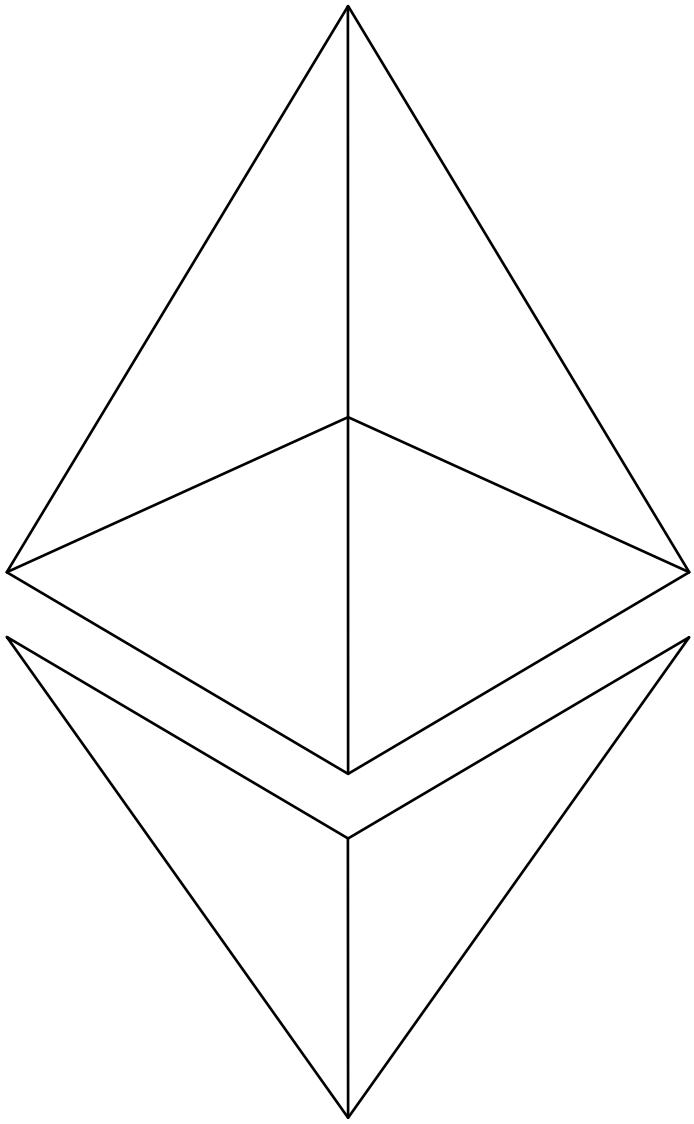
Figure 10: Comparison of cryptoasset protocol yields (Source: Staked.us)



Ethereum Investment Thesis

Conclusion

This investment thesis has outlined the latent potential in Ethereum as an asset. We believe that Ethereum will continue to present one of the most lucrative investment opportunities over the next decade as it continues to act as a settlement and issuance layer for vast swathes of existing capital markets infrastructure.



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Footnotes

1. (a) **ZK-based and Optimistic Rollups**: Two different methods which involve compressing (or "rolling-up") several Ethereum transactions into a single transaction to improve scalability; (b) **Plasma and Sidechains**: Methods which aim to enable fast and cheap transactions by offloading Ethereum transactions to a blockchain (or "sidechain") which connects to the main Ethereum blockchain; (c) **State and Payments Channels**: Methods which enable faster transactions by allowing for bi-lateral interactions between two participants on the Ethereum blockchain, which are settled on the main blockchain at a later date.

2. As mentioned, Ethereum 2.0 will follow a phased roadmap from "Phase 0" to "Phase 2". This will likely stretch the upgrade over multiple years, with each phase introducing more of the aforementioned capabilities for the new Ethereum blockchain than existed before. **Phase 0** will include the launch of the beacon chain on the Ethereum 2.0 network. This will be the first implementation of PoS, and the chain will be used to manage and register validators who will stake for blocks on Ethereum 2.0. During this phase, users will be able to stake their Ether and received rewards or yields on their deposits. In addition, the original Proof of Work Ethereum chain will continue to exist. **Phase 1** will introduce Sharding to the existing Proof of Stake, which will help significantly scale Ethereum 2.0. The Ethereum blockchain will be separated into 64 separate chains then run concurrently and increase the amount of information that can be stored on Ethereum 2.0. **Phase 2** is the point at which both Sharding and Proof of Stake are fully implemented and users can carry out full transactions and engage with smart contracts in a scalable manner, built on top of an environmentally-friendly blockchain.

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