Bitcoin + Ether: An Investor’s Perspective

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Bitcoin (BTC) is often considered the gateway asset into crypto and it’s not difficult to understand why.

As the crypto asset with the largest market capitalization, highest price and trade volume (excluding fiat-backed stablecoins), bitcoin can be likened to a blue chip. Blue chips in crypto are assets that are well-recognized, well-established and maintain a high value relative to other coins. In May last year, Coinbase - the largest U.S.-based crypto exchange - reported that 60% of customers start out by buying bitcoin. However, only 24% of these customers end up holding bitcoin alone.

Bitcoin’s value as measured by its market capitalization already accounts for close to two thirds of the total market capitalization of all crypto assets combined. Over the last two years, fluctuations in the price of bitcoin have been strongly correlated with the prices of other major crypto assets. This reinforces the idea that there’s not much in the market for traders, investors and crypto assets holders to be exposed to beyond bitcoin.

But the crypto markets are evolving, becoming more diverse and mature. Other crypto assets have grown in liquidity and resilience, and investors are starting to more seriously consider crypto diversification. This is supported by a declining correlation between BTC and other assets, as different use cases and potential outcomes become better understood.

Ether, the native token for the Ethereum blockchain, is the industry’s second largest crypto asset by market capitalization and trade volume (excluding fiat-backed stablecoins). This makes it an obvious candidate for institutional investors wishing to

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**Correlations Between BTC and Other Crypto Assets Are Declining**

![Correlations Graph]

*CMB10EX tracks the value of the nine largest non-bitcoin crypto assets; CMBIETH tracks the value of ether*
diversify their crypto allocation, especially given its higher risk profile and higher year-to-date, 3-month and 12-month returns. The declining correlation between BTC and ETH reinforces the case for diversification, as do the divergent development paths and use cases for the two assets.

The differences between the two also underscore the benefits of considering each asset individually, rather than just as part of a “crypto basket.” Many institutional investors see bitcoin as a store-of-value play, a type of “digital gold.” Ether, on the other hand, tends to be seen more as a technology play, or as a consumable asset similar to “digital oil.” Both analogies only cover part of the picture, but represent the need to employ different mental models when considering the relative merits.

Indeed, according to industry insiders, some professional investors have chosen an ETH-first allocation, betting on relative outperformance in terms of growth from the Ethereum blockchain and its native asset. In this report, we'll look at the investment case and some key metrics for both bitcoin and ether. This will not be a technical or academic paper - for more detail on how Bitcoin and Ethereum’s technologies work, see our reports on the Bitcoin halving and Ethereum 2.0. Nor is it investment advice. Rather, we hope to present the various theses behind each asset’s value, as well as their risks, and show how their evolution can be tracked. Our hope is that readers will find this topic interesting enough to continue learning.

Note: Throughout, we capitalize the blockchain (Bitcoin, Ethereum) and use lower case or trading symbols (bitcoin/BTC, ether/ETH) for the asset. Dollars are U.S. dollars (USD). Nothing in this paper should be considered investment advice.

**SIDEBAR: What is the double-spend problem?**

Physical cash cannot be spent twice by the same owner. That certainty in the digital world is more complicated. How do you ensure that a digital copy of the coins has not been made, or that the coins were not sent to two addresses simultaneously? With digital currencies, there needs to be a way to know that once coins have been transferred by a user, he or she cannot use them again in a different transaction. This is the double-spend problem.

Bitcoin’s novel proof-of-work consensus uses long strings of alphanumeric characters known as hashes to ensure that data confirming certain transfers are difficult to reverse. These hashes are notoriously energy-intensive to calculate and require powerful and specialized machines. The process of validating transaction data on a proof-of-work (PoW) blockchain is known as “mining,” and the validators as “miners.” In exchange for their computation work, they are rewarded with a certain amount of BTC.

Ethereum and Bitcoin rely on PoW. However, the energy intensive nature of the protocol is one of the primary reasons why Ethereum is transitioning toward a different consensus protocol known as proof-of-stake (PoS), in which transactions are validated by a consensus of network stakeholders.
VALUE PROPOSITION: Why are investors interested?

Identifying the potential value narrative behind traditional investments is relatively easy. This share is a bet on the airline industry, this bond has a high yield, this ETF gives exposure to emerging markets ... When it comes to as new a concept as cryptocurrencies, however, the question becomes much more complicated. How do you form an investment thesis when the assets don't fit into traditional mental buckets?

Cryptocurrencies are a novel type of asset in that they span more than one use case and more than one value driver. This can be confusing for investors, but it also enhances the potential of market leaders such as bitcoin and ether. With many potential narratives in play, success does not depend on one outcome.

What's more, the interplay between the various narratives lends strength to the overall investment case. Each narrative is stronger because of the existence of the other, whatever the dominant narrative ends up being.

Bitcoin is today mainly seen as a store of value. This is strengthened by its potential “intrinsic value” technology use as a decentralized payment rail or data transmission platform. Ether, on the other hand, is mainly seen as a technology play, but its upside potential also depends on its store-of-value properties. Below we look at the principal narrative drivers of the two assets, with the aim of clarifying some of the differences between them and highlighting the interplay between the value propositions.

Why bitcoin?

The value proposition for bitcoin has evolved over time as its market has become more sophisticated. In the early days, the purchase of bitcoin was a speculative bet on a new technology, and focus was on getting people to use it in transactions.

Now, as more professional investors have allocated bitcoin to their global portfolios, it is increasingly taking on a store of value role. The technology component of bitcoin as an investment is still significant, however.

Store of Value

The financial definition of a store of value is an asset capable of retaining its value over time. A key element of this is a supply that increases at a slower rate than demand.

Many issuers of financial assets succumb to the temptation of rapidly rising prices by issuing more of an in-demand asset. The issuer enjoys the additional funding, and the increased supply eventually satisfies demand and slows down or even reverses the price increase.
For this reason, assets that have a supply limit are generally seen as better stores of value. Examples of this are real estate (although buildings in cities are getting taller), gold (although the metal's supply is a function of its price) and bitcoin.

Bitcoin is the only asset currently traded on markets with a truly hard limit. Its cap of 21 million units is hard-coded into the Bitcoin protocol, and would be impossible to change without consensus from all network participants. Given the negative impact this would have on bitcoin's value proposition, and given Bitcoin's decentralization, such consensus would not be forthcoming.

Other cryptocurrencies have hard caps, but are not as decentralized as the Bitcoin network, which means that consensus for a protocol change would be easier to achieve. Ether runs on a decentralized blockchain, and has no set supply limit.

This is the main reason many investors see bitcoin as a store of value, often referring to it as “digital gold.” Its supply is fixed by the underlying protocol and cannot be influenced by the level of demand.

New issuance is also controlled and cannot be influenced by the price. Currently, the protocol releases 6.25 BTC in each new processed block. This amount reduces by 50% every four years. The next “halving” is expected in 2024, and will dwindle to 0 as the supply limit is reached, expected in around 2140.

Some argue that bitcoin is too volatile to be a store of value. This takes a short-term view of the concept. It is possible that bitcoin will not hold its value relative to the U.S. dollar over the next few days. (More on bitcoin’s volatility below.) Over the medium- to long-term, however, bitcoin’s value against the dollar is expected to grow, as the increase in the number of dollars in circulation seems to have no limit.
This is even more relevant in countries with a history of rampant inflation - for many in these regions, bitcoin represents an opportunity to maintain and perhaps even increase the purchasing power of savings.

Others argue that bitcoin makes a poor store of value because it has no intrinsic use. This overlooks bitcoin's innovative technology and its use as a payment token. It is true that BTC transactions are currently not ideal for payments, in that they are relatively slow and expensive compared to other electronic alternatives. However, many regions do not have access to payment facilities available in much of the developed world - for them, bitcoin is an ideal payment mechanism, in that it enables online transactions without the need for a bank account or centralized approval. And, as new bitcoin payment services and second layer solutions continue to expand their reach, Bitcoin could become a more attractive payment rail even to developed nations in the future.

Compared to gold, which has been a trusted store of value for over 5,000 years, bitcoin is young and relatively untested. While this adds risk, its relative youth is one of the aspects that makes it an appealing investment, for the higher potential upside as its wealth preservation role becomes more apparent and more valuable.
A further advantage that bitcoin has over gold and other stores of value such as art and real estate is that it is liquid. You can buy or sell millions of dollars worth of bitcoin 24 hours a day, seven days a week, within seconds. Or, you can transfer it to another holder, at any time, without going through a financial intermediary.

Also, as we mentioned above, we all assume gold’s supply is limited, but in reality, we don’t know how much gold there is in existence, and how much left to extract. Should gold’s price increase, mining efforts would increase and the current supply would grow. The total potential supply would also grow with enough of a price jump, as new mining methods would become possible. Unlike gold, bitcoin’s current and future supply cannot be influenced by its price, no matter how high it gets.

What’s more, bitcoin has several advantages over gold as a store of value. For one, it’s more portable. A store of value that you may have to leave behind has limited use. True, gold could be held by third parties on your behalf - but that makes it vulnerable to seizure.

Unlike even gold held in a personal safe, bitcoin is seizure-resistant, in that only holders of the private key to a wallet can move associated tokens. While brute force could encourage some to give up their private key, the perpetrators would first need to decipher and prove the existence of the holdings. This point is of less relevance to institutional investors, however, most of whom will use third-party custody service providers with identification and protection.
SIDEBAR: What is Taproot?

Given the wealth riding on the network, protocol upgrades are slow and painstaking - Taproot has been in the works for years, and although it has achieved network consensus and has been incorporated into the protocol code, it has not yet been activated.

The Bitcoin community is excited, however, as it will be the most significant upgrade to the network’s potential since the activation of the block capacity enhancement of SegWit in 2017.

The upcoming adjustment to Bitcoin’s protocol includes (but is not limited to) the following improvements:

- It will enhance privacy by making multi-signature transactions indistinguishable from normal, peer-to-peer transactions.
- It will increase the limit on the number of signers on multi-signature transactions.
- It will allow lighter and more complex “smart contracts” (encoded self-executing rules) on top of the Bitcoin blockchain, which could enhance Bitcoin’s functionality.
- It will make the lightning network (which enables layer 2 payments) more flexible and private.

A Technology Play

Bitcoin is more than a scarce yet liquid store-of-value asset - it is also a technology play.

Bitcoin introduced a radically new way to transmit information, without risk of censorship or manipulation. Its code is relatively rigid and simple, which gives it extra security in that its attack surface is reduced. This also limits its flexibility, however.

Work is currently underway to improve Bitcoin’s scripting potential. While it is possible to create conditional payments and to require a certain combination of distinct digital signatures, this is currently unwieldy.

The upcoming Taproot upgrade (see sidebar) will give Bitcoin a boost to transaction privacy and allow for more lightweight and complex “smart contracts” (encoded self-executing rules). Furthermore, projects such as Sovryn and languages such as Minsc hope to encourage more experimentation with the technology’s functionality by making Bitcoin “smart contracts” (self-executing blockchain applications) easier and safer to work with.

This change poses little risk to the network itself, as any proposed upgrade to the actual code has to go through rigorous testing and approval processes, and even then has to still overcome the considerable barrier of achieving consensus from the majority of miners and users.
As the Bitcoin network continues to expand, more development will emerge on its periphery to enable more complex functions as well as to enhance connectivity with other blockchains.

Furthermore, it is often overlooked that Bitcoin can be used to transfer more than just value. It can also be used to timestamp documents and images without the risk of interference or manipulation. Anything that can be condensed into a cryptographic hash can be included in a Bitcoin transaction and embedded on the blockchain.

This function is not often used as yet, but could become more popular should the integrity of records stored on centralized databases get called into question.

Why ether?

While many investors see bitcoin as primarily an emergent store of value and as a secondary consideration a technology play, the situation is reversed with ether. Investors tend to see ether as mainly a technology bet, and as a secondary consideration, a store of value.

Ether has the additional consideration of yield. Ethereum has begun its migration toward a new type of blockchain, known as Ethereum 2.0, on which committed stakeholders can earn relatively attractive returns just by holding the asset in a special type of account, effectively making ether a productive asset.

A technology bet

As we saw above, Bitcoin’s technology is advancing, but incrementally and slowly. Its consensus mechanism was largely baked in at launch, and its relative simplicity is accepted as a trade-off for greater security.

Ethereum’s technology is still nascent, however. It’s not so much that the blockchain is younger (in its sixth year of operation vs. Bitcoin’s 12 years); it’s that Ethereum is radically changing its technology to what it sees as an improved consensus mechanism.

Up until December 2020, both BTC and ETH were issued solely through proof-of-work (PoW) consensus and the process of mining. However, towards the end of last year, Ethereum began a planned migration to a new consensus mechanism known as proof-of-stake (PoS). Rather than miners, the responsibility for transaction processing and network consensus, as well as the reward of newly issued ether, falls to validators according to their committed asset holdings.

The first major step in this migration was the launch in December 2020 of the Beacon chain. For now, the new ether generated on the Beacon chain is locked up in validation accounts so as to not distort circulating supply. Transfers between validation accounts are not enabled. In Phase 1.5 of Eth 2.0 development, which could be as much as a few years away, developers expect to
activate ETH transfers from Ethereum PoW blockchain to its PoS blockchain and vice versa.

When this merge is complete, the security model of Ethereum will differ starkly from that of Bitcoin. One will be secured primarily through the process of mining and the other through the process of validating. It is important to note that development for these two crypto assets are advancing two different systems for long-term blockchain security.

Ether represents a long-term bet on PoS becoming the most trusted and used protocol for securing public blockchains. Without the same energy consumption pitfalls as Bitcoin and yet aiming for higher levels of decentralization, security and efficiency, ether is the largest PoS experiment by market capitalization and trade volume in the crypto industry today. It has the potential to reshape how developers, companies and governments think about security for decentralized networks.

In this way, ether can be considered a type of venture capital play on a new technology, with a similar risk/reward profile. It has the added benefit of being a liquid asset, however - investors can enter and exit positions 24/7/365.
Bet on DeFi

Ether also represents the growth of interest in decentralized applications, known as “dapps.” As we saw above, Bitcoin’s code is relatively simple, which does not allow for great flexibility in the network’s functionality. It was built to do one thing exceptionally well.

Ethereum, on the other hand, was built to be flexible, which has generated a vast range of creative applications based on its blockchain. These benefit from the strong developer support for Ethereum’s technology, from the collective innovation on the network itself, and from being able to interact with other applications within the community.

In order to interact with dapps, users need to pay transaction fees on Ethereum denominated in ETH. Fees have been skyrocketing on the network since mid-2019 as a result of growing interest in decentralized finance (DeFi) dapps, which are applications that mimic and innovate upon some traditional finance industry services such as lending, borrowing and trading in crypto assets.

Activity in DeFi applications has seen strong growth over the past year, as can be seen by the total amount of value locked in smart contracts (see chart below).

The growth has been fueled largely by the attractive yields available on some platforms, and by growing interest in the extraordinary innovation in the space.

This interest is getting a mainstream boost from the increasingly apparent vulnerabilities and inequities of current capital markets plumbing. In a world of automated crypto asset trading and lending facilitated by self-executing dapps, assets cannot be “lost,” trades cannot be frozen, loans can’t be called without validated reason, and all traders programmatically have equal priority.

Ether is an essential resource for users wanting to interact with decentralized applications built on Ethereum. As adoption for dapps on Ethereum continues to increase and become unbounded by the network’s own technical limitations through its PoS upgrade, value for ether is expected to rise in step with user demand for the crypto asset in order to pay for the diverse array of services hosted by the Ethereum blockchain.

Total Value Locked (USD) In DeFi

Source: defipulse.com
While ether does not have a fixed supply cap, it does have an active community of developers and users that are regularly introducing changes to the core technology of Ethereum. One of those changes that is being debated for implementation is EIP 1559: Fee Market Change for Eth 1.0 Chain.

If the change is approved, EIP 1559 would enable a large portion of fees paid by users to miners for transactions and smart contract deployments to be burned, effectively removing the corresponding amount of ether from circulation. The other portion of fees defined as transactions “tips” would go directly to miners as an incentive for their work.

The rationale for burning fees is to support an algorithmic model that prices the cost of using Ethereum instead of leaving it up to users and miners to decide. In times of high network traffic, this algorithmic model would automatically raise fees in order to taper user demand for Ethereum, and the opposite when network traffic is low. As a result, the amount of ETH that would be destroyed may be greater at certain points in time than others.

When fees are high, the amount of ether burned could amount to more than the total ether created over the same time period. However, this is not guaranteed, as there is no certainty as to what user demand for Ethereum-based applications will look like in years to come.

Debate and discussion over the activation of EIP 1559 on the Ethereum network is ongoing.
Store of Value

Another important difference between ether and bitcoin is total supply. Bitcoin has a hard supply cap of 21 million coins that is being issued and distributed gradually through block rewards. (Read our free report on bitcoin issuance and supply to learn more.) Ethereum also issues ether in gradual increments every block. However, the supply of ETH that can be generated is unlimited.

Ethereum chose to not have a supply limit as that would imply having a fixed security budget for the network. Instead, the protocol’s monetary policy can be best described as "minimum issuance to secure the network." Ethereum’s issuance pattern is more complicated than that of Bitcoin, with new Furthermore, the amount of new ETH issuance has declined over the years, and is expected to decline further once the migration to Eth 2.0 is completed.

One factor that will offset the supply increase is the amount of ETH locked up in staking accounts, which effectively removes ETH from circulation. To prevent circulating supply from declining to a level that impacts Ethereum’s use as an application network, the yield declines as more ETH is staked.

Ether’s store of value narrative is likely to be enhanced by the implementation of EIP 1559 (see sidebar), which introduces “fee burning” in which a portion of ether used to pay for transaction fees is removed from the circulating supply.

This adds a further disinflationary or possibly even deflationary aspect to ETH’s supply schedule. As with the current PoW Ethereum blockchain, Eth 2.0 will continue to issue new ETH as validation rewards. The amount of ETH burned as fees, should EIP 1559 be implemented, will partially or perhaps totally offset the supply increase.

The philosophy behind the ETH supply schedule is to maintain the “minimum issuance to secure the network.” This is what gives ETH a potential store-of-value quality, since many investors assume that growth in demand will continue to outstrip growth in supply.
Yield

On a proof-of-stake protocol, ether can function as a productive asset and generate yield for its holders in the form of annualized interest. Anyone with a minimum of 32 ETH can earn 7-8% APR on Ethereum 2.0 by locking up the coins into the network and becoming a validator. This does require some technical knowledge and dedicated hardware. However, compared to mining on PoW, it is comparatively less energy intensive and does not require specialized machinery outside of a general purpose computer.

Alternatively, ETH holders can also opt into using the services of staking providers which manage validator operations for clients in exchange for a small cut of earned rewards.

At time of writing, almost 3% of all ether in circulation has been locked into earning interest on Eth 2.0.

The interest earned by validators on Eth 2.0 is expected to decline over time to roughly 4-5% as more ETH is accumulated on the network. These rates will compete with the amount of rewards users are able to earn on various centralized and decentralized lending platforms that also allow ETH holders to earn an interest on their ETH.

It is possible to earn high yields on many of the DeFi protocols currently running on Ethereum, in many cases significantly higher than that offered by Ethereum staking. However, with Eth 2.0, investors can earn income on a base layer asset staked on the base blockchain, without any application risk and without the need to switch into other tokens.
THE MARKETS

Exchanges

In traditional markets, stocks usually trade on just one exchange. They can trade on more than one, but each additional listing incurs significant costs in fees, paperwork and compliance.

Crypto markets are different. BTC and ETH currently list on hundreds of exchanges, and do not pay any fees or file any paperwork to do so (who would do the paying and filing?). The exchanges in crypto markets decide what assets they want to list.

Many of these exchanges have little oversight. Some, however, are based in jurisdictions with relatively strict rules about licensing and financial controls.

Spot crypto exchanges in the U.S. currently do not fall under the oversight of the U.S. Securities and Exchange Commission (SEC), since most of the traded assets have not yet been classified as securities. In the case of BTC and ETH, it is increasingly unlikely they ever will.

SIDEBAR: What do we mean by “clean” exchanges?

“Clean” exchanges are trading venues that have been examined and do not appear to be falsifying trading data.

In 2019, Bitwise presented research that showed some exchanges engaging in practices such as wash trading to artificially inflate volumes, in order to attract traders as well as projects willing to pay in order to list. Examining the rhythm, frequency and amounts of BTC trades can reveal whether an exchange is displaying authentic market data or not.

The Bitwise report listed 10 exchanges as having “clean” volume: Binance, Coinbase, Bitstamp, Kraken, Gemini, Bitfinex, Bitflyer, itBit, Bitstamp, Bittrex and Poloniex. To this list we would add LMAX Digital, the crypto asset arm of LMAX Group, an established institutional FX liquidity provider.

BTC Volume by Currency

Source: Cryptocompare, taken Feb. 15, 2021
Those that have derivatives operations fall under the oversight of the U.S. Commodity Futures Trading Commission (CFTC), but only for the derivative products. For this purpose, the CFTC treats BTC and ETH as commodities.

Most BTC trading is done not in U.S. dollars, but in USDT, a stablecoin in theory backed by dollars which runs on the Ethereum blockchain. Stablecoins have the advantage of being able to move swiftly from one exchange to another, regardless of jurisdiction.

ETH trading is also largely denominated in USDT, but also has a sizeable proportion based in BTC. The reverse does not hold, the BTC/ETH pair is not a significant part of the BTC market.

The largest fiat BTC and ETH exchange is Coinbase, headquartered in San Francisco, and about to go public.

One complication of crypto markets, not present in traditional markets, is the lack of reliable data on overall trading volumes. Some unregulated exchanges fake trading data in order to attract traders and assets willing to pay to list (see sidebar on previous page). Yet even some large trading venues that are left off the “clean” exchange lists may have significant real volume.

Another complication with crypto markets is the lack of an established and universally recognized asset price. Because BTC, for example, trades on so many exchanges, it can have many different prices at any given time, depending on the exchanges’ order books. This makes it complicated for BTC-based investment products to accurately price BTC-based investment products. To solve this problem, the industry relies on indexes, which calculate a price based on a range of inputs from various exchanges. This price is taken to represent the market’s position.

CoinDesk’s subsidiary Tradeblock operates one of the industry’s most widely used bitcoin price composites, XBX, which is an amalgam of prices from the four largest licensed exchanges in the U.S. and Europe: Coinbase, Kraken, Bitstamp and LMAX Digital.

Both BTC and ETH have seen a surge in volumes on tracked exchanges since the beginning of the fourth quarter of 2020.
The average trade size for BTC and ETH on Coinbase, the largest U.S.-based exchange, has been growing, indicating the entrance of investors with bigger pockets.

**Trade Size of BTC/USD and ETH/USD on Coinbase**

![Graph showing trade size growth for BTC and ETH on Coinbase](https://example.com/trade-size-graph)

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### BTC vs ETH

<table>
<thead>
<tr>
<th>Metric</th>
<th>BTC</th>
<th>ETH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market cap</td>
<td>$863.63 billion</td>
<td>$165.94 billion</td>
</tr>
<tr>
<td>7-day average daily spot trade volume*</td>
<td>$3.39 billion</td>
<td>$1.18 billion</td>
</tr>
<tr>
<td>7-day average open interest - futures</td>
<td>$14.64 billion</td>
<td>$4.60 billion</td>
</tr>
<tr>
<td>7-day average open interest - options</td>
<td>$9.20 billion</td>
<td>$2.12 billion</td>
</tr>
</tbody>
</table>

*Data as of Feb. 26, 2021

Source: CoinDesk Research
Futures

Derivatives markets tend to take time to mature, but bitcoin’s derivative ecosystem has done so relatively quickly. This is largely due to its fragmented and unregulated nature - the first bitcoin derivatives sprang up on offshore venues focused on both retail and professional traders. The market’s trading volume is currently dominated by large exchanges that operate mainly out of Asia, and which offer high leverage that can exceed 100x.

In December 2017, the Cboe Futures Exchanges started trading the first crypto derivative product accessible to regulated U.S. institutions. The CME, the world’s largest futures trading venue, followed suit a few days later. In March 2019, the Cboe retired its bitcoin futures contracts, while the CME has recently risen to become one of the top three bitcoin futures exchanges in terms of open interest. Since the CME is currently the only futures exchange that many regulated funds can trade on, this signals growing institutional interest in bitcoin derivatives, either as hedging tools or speculative instruments.

The fourth quarter of 2020 saw a strong rise in futures open interest across most derivatives platforms, indicating growing market participation from a wide range of investors. In a virtuous circle, more liquidity in bitcoin futures will bring in more traders which will provide greater liquidity, and so on. This makes taking directional positions much easier for investors and supports the growth of the bitcoin options market, which in turn will make hedging easier for investors, miners and other industry participants.

Source: skew.com, taken Feb. 25, 2021
Ether’s derivatives markets are younger and thinner than those of bitcoin, but have seen a similar surge in both trading volumes and open interest.

Source: skew.com, taken Feb. 25, 2021

The market did not have CME-listed ether futures until early February 2021. They were launched on Feb. 8, trading over $30 million worth of contracts on the first day. Since then, the volume has headed upwards.

Source: skew.com, taken Feb. 23, 2021
Options

Bitcoin’s options market started to develop well after the futures market, but it also saw strong growth in volumes and open interest in the fourth quarter of 2020. The bitcoin options market is still relatively immature, although BTC options do trade (in relatively low volumes) on the CME and on Bakkt, a U.S.-based crypto exchange backed by NYSE parent ICE. Most crypto options activity currently takes place on Deribit, a platform based in Panama.

The ether options market is even more immature - its options open interest is less than half that of open interest on ether futures (vs. almost 75% for bitcoin, at time of writing). As with bitcoin, most volume is transacted on Deribit, and neither the CME nor Bakkt, two U.S.-based exchanges that trade bitcoin options, have as yet listed options on ether.
The below charts show the performance of BTC and ETH relative to traditional assets such as stocks (represented by the S&P 500), gold and bonds (represented by the TLT long bond index).

<table>
<thead>
<tr>
<th>Asset</th>
<th>Return</th>
<th>Risk</th>
<th>Sharpe Ratio</th>
<th>Avg. Intraday Move</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTC</td>
<td>69.42%</td>
<td>111.45%</td>
<td>283.48%</td>
<td>423.84%</td>
</tr>
<tr>
<td>ETH</td>
<td>117.73%</td>
<td>174.50%</td>
<td>310.22%</td>
<td>595.15%</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>4.54%</td>
<td>10.26%</td>
<td>14.34%</td>
<td>26.00%</td>
</tr>
<tr>
<td>Russell 2,000</td>
<td>15.67%</td>
<td>27.95%</td>
<td>45.64%</td>
<td>47.12%</td>
</tr>
<tr>
<td>Nasdaq 100</td>
<td>3.21%</td>
<td>11.72%</td>
<td>14.42%</td>
<td>49.90%</td>
</tr>
<tr>
<td>Gold</td>
<td>-5.37%</td>
<td>-3.93%</td>
<td>-6.75%</td>
<td>9.62%</td>
</tr>
<tr>
<td>Silver</td>
<td>5.31%</td>
<td>15.05%</td>
<td>5.18%</td>
<td>55.13%</td>
</tr>
<tr>
<td>Bonds*</td>
<td>-2.57%</td>
<td>-2.78%</td>
<td>-3.10%</td>
<td>-0.19%</td>
</tr>
</tbody>
</table>

*Benchmark: Total Bond Market

*Source: CoinDesk; TradingView; IntoTheBlock; As of Feb. 24, 2021
Volatility

The high returns of BTC and ETH are a byproduct of their volatility, which is itself a byproduct of the assets’ relative youth and value proposition. Note that ETH’s volatility is significantly higher than that of BTC - this reflects its five-year trading record, vs. BTC’s 12 years. It also reflects ETH’s greater exposure to technological progress and impact, as the potential outcome of the migration to a new type of blockchain, and the potential growth of applications on that blockchain, have yet to be fully understood.

Crypto Assets are More Volatile

Volatility is seen as a negative by many investors. It is also, however, an engine of growth. It can be a barrier for some, but a magnet for others attracted by the potential upside and who understand the role of volatility in early innovations.

While the volatilities of BTC and ETH are high, they have both trended down over the years. This is likely to continue, although there is a strong chance the asset volatilities will always remain higher than traditional assets given their inelastic supply and narrative-driven demand.

(For more on crypto volatilities, see our report “Volatility: What It Means In Crypto Markets”)

Bonds = iShares 20+ Year Treasury Bond ETF; Gold = London Bullion Market pm fixing price; Source: CoinDesk Research, St. Louis Fed, Yahoo Finance
Correlation

Up until 2020, the 60-day correlation of BTC and ETH with the S&P 500 was relatively low, hovering between 0.2 and -0.2 for BTC and 0.3 and -0.3 for ETH. This changed with the March 2020 crash, when BTC and ETH joined other assets in the turmoil. The 60-day correlations with the S&P 500 shot past 0.5, and remained relatively high for most of the rest of the year.

Towards the end of 2020, the correlation with stocks started to normalize, heading back below 0.2, as the unique value propositions of BTC and ETH have become more apparent to a wider range of investors.

A similar story has played out in the 60-day correlations with gold. From 2017-2019 they hovered around 0, breaking that trend in the market ructions of early 2020. Recently, however, the 60-day gold correlations are back around 0.
This is potentially confusing for those that see bitcoin as “digital gold.” If the two are similar in investment properties, why isn’t the correlation higher? Part of the explanation is that BTC is still a young asset, which largely explains its higher volatility and outperformance, which in turn lower the correlation between the two.

The correlation between BTC and ETH has been above 0.8 for most of the past three years. As we saw in the chart shared in the introduction, this was representative of BTC’s market influence as the crypto asset with the longest history, deepest understanding and most developed market infrastructure.

Since then, the influence of BTC on the market as a whole has been declining, as other types of blockchains and assets become better understood, and as market infrastructure has evolved to support a broader range of assets.

(For more on this topic, see our report “Correlation: Crypto’s Most Enigmatic Metric”)

Data as of Feb. 26, 2021

Source: Coin Metrics

<table>
<thead>
<tr>
<th></th>
<th>BTC</th>
<th>ETH</th>
</tr>
</thead>
<tbody>
<tr>
<td>YTD returns</td>
<td>61.50%</td>
<td>100.12%</td>
</tr>
<tr>
<td>3m returns</td>
<td>89.66%</td>
<td>136.21%</td>
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<tr>
<td>12m returns</td>
<td>401.23%</td>
<td>545.69%</td>
</tr>
<tr>
<td>30-day volatility</td>
<td>99.66%</td>
<td>105.98%</td>
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<tr>
<td>60-day correlation to each other</td>
<td>0.71</td>
<td>0.71</td>
</tr>
<tr>
<td>60-day correlation to S&amp;P 500</td>
<td>0.38</td>
<td>0.35</td>
</tr>
<tr>
<td>60-day correlation to GOLD</td>
<td>0.09</td>
<td>0.11</td>
</tr>
</tbody>
</table>

*Data as of Feb. 26, 2021

Source: CoinDesk Research
ON-CHAIN METRICS

SIDEBAR: What do we mean by “on-chain metrics”?

Crypto assets are a unique asset group in many aspects, not least because of the amount of data their blockchain-based activity reveals. Blockchain transactions are transparent - they are visible to anyone - and detailed, with granular information on amounts transferred, timing, etc.

The open and transparent nature of blockchains also gives valuable insight into the state of the network as a whole, as information on all addresses can be aggregated and analyzed.

The same can be said of transaction history. With assets based on public blockchains, we can analyze all transactions going back to the launch of the network. This gives us insight into how long coins have been held, at what price they were acquired at, what is the transaction profile of the addresses that hold them, and much more.

The available data also gives rise to unique ratios and other analytical tools that hint at investor sentiment and market behavior. For more information on these and others, see our in-depth explainers.

Holdings

We’re familiar with the use of the term “address” to identify a place. An “address” in cryptography is a similar concept - a unique series of characters that specify a destination.

Bitcoin and Ethereum treat address accounting differently (see sidebar), but in both cases, given the transparency of the blockchain, the dispersion and contents of the addresses can be analyzed to reveal insights about network growth and market behavior.

![Recent Spurt In Activity Growth](image)

*Source: Coin Metrics*
For instance, by looking at the growth in the number of active addresses (those that have either sent or received coins on a given day, chart on previous page), we can see the evolution of network economic activity. Note the strong growth since the beginning of 2020.

By looking at the growth in the number of addresses that hold more than $1 worth of BTC, we can see the almost exponential growth in the size of both networks. The number of non-dust addresses on Ethereum has now exceeded those on the Bitcoin blockchain.

The Network Effect

- Addresses with >$1 BTC
- Addresses with >$1 ETH

Source: Coin Metrics

If we look at the number of addresses that hold over $10 million worth of value, we can see the growth in deep-pocketed participants, many of whom will be institutional investors. The chart below shows that BTC is at this stage more of an institutional asset than is ETH.

Institutional Assets

- Addresses with >$10M BTC
- Addresses with >$10M ETH

Source: Coin Metrics
As you may have noticed, there is a difference in terminology for the storage of coins on Ethereum versus on Bitcoin. On Bitcoin, coins are held in addresses while on Ethereum, they are held in accounts. The reason for this comes down to the differing transaction models of these two crypto assets.

Bitcoin is based on an unspent transaction output (UTXO) model for recording transfers of value on-chain. UTXOs are the receipts held in Bitcoin addresses that affirm the owner of the address has a balance of coins they can transfer and spend on the network.

Ethereum is based on an account model which is analogous to how funds are held within traditional bank accounts. Each Ethereum account has a single balance of ether that gets debited and credited at the creation of a new block. The data stored in each block on the network containing updated records of all account balances is known as Ethereum’s “global state.”

The main advantage of an account-based model for on-chain transactions is its simplicity. Rather than spending UTXOs like paper bills in order to transfer coins through the network, spending coins from a blockchain account is comparatively easier to initiate automatically through smart contracts. Smart contracts don’t need to handle change in the form of new UTXOs created each time ether is transferred. They also don’t need to verify and differentiate unspent coins from spent ones on the network.

The total number of unique accounts on Ethereum can be a misleading metric. This is because the vast majority are not actively used to send transactions on the network. What’s more, over one fifth of Ethereum accounts are controlled by code and not by users.
Bitcoin’s accounting mechanism permits a metric not available for Ethereum: the number of accumulation addresses (those which have had at least two incoming non-dust transfers and have never spent funds). This also reveals significant growth in investment (as opposed to trading) activity since early 2018. Note the spurt to all-time-highs since the beginning of 2021.

The crypto community has a special name for this kind of investment behavior: **HODL**, which is an intentional mis-spell of the word “hold.”

**Economic activity**

**Transactions**

One indicator of growing adoption and use for any blockchain is the number of transactions executed on the platform. The chart below shows the different levels of economic activity on Bitcoin and Ethereum in terms of number of transactions.
It’s obvious that the Ethereum blockchain is much more active in terms of transactions. However, the average size of transfers in U.S. dollar terms on Bitcoin is notably larger.

**Bigger Spends on Bitcoin**
- BTC Average Transaction Size
- ETH Average Transaction Size

![Source: Coin Metrics](image)

On the Ethereum blockchain, not all transactions involve transfers of ETH.

A closer look at the type of transactions being executed on Ethereum shows that close to 30% of all transactions are transfers of ERC-20 or ERC-721 tokens. These are fungible and non-fungible crypto assets created on Ethereum through smart contracts, for a wide range of decentralized applications, or dapps.

**Ethereum Activity Gets More Diversified**
- ETH Transaction Count
- ETH Token Transaction Count

![Source: Coin Metrics](image)
The growing percentage of transactions on Ethereum for ERC-20 and ERC-721 tokens also suggests ether’s value proposition as a form of payment for engaging with dapps is getting stronger. As Ethereum’s dapp ecosystem broadens and attracts more users, the share of transactions involving transfers of tokens is likely to increase. However, as of February 2021, the majority of transactions on Ethereum remain peer-to-peer transfers of ETH.

DeFi

Diving deeper into the topic of DeFi, the latest surge of on-chain activity on Ethereum has largely been as a result of user activity on popular DeFi apps.

The collective value of DeFi apps make up over 20% of Ethereum total market capitalization. As of February 2021, close to 8 million ETH, worth roughly $15.3 billion, has been locked up in DeFi accounts either as collateral for loans or liquidity for decentralized exchanges, among other financial use cases. This equates to almost 7% of total ether supply.

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Source: IntoTheBlock, taken Feb. 18
Velocity

Velocity as applied to crypto assets is a measure of how many times a coin gets transferred between addresses or accounts over the course of a year. It is calculated by dividing the value transferred adjusted for non-economic transactions (such as transfers between addresses held by the same entity) by the current supply.

An asset's velocity can be taken as a representation of its utility. A coin with high circulation is “used” more often than one with low circulation, and a declining velocity can show that a coin is increasingly being used as a store of value.

The chart below shows that bitcoin’s gradually declining volatility supports the current consolidation of the store-of-value narrative. An interesting development is the jump in ETH velocity, which highlights the growing utility of the Ethereum blockchain.

![ETH Velocity Is Picking Up](chart)

The spike in ETH velocity in 2018 was largely fueled by the crypto market bull run of 2017, during which ether was the most popular asset through which to support and give funds to crypto projects that were hosting [initial coin offerings (ICOs)](https://www.coindesk.com). The recent rise in ETH velocity is likely fueled by the ongoing popularity of DeFi applications.

ETH is not the only token that can be used for DeFi applications, however, which is why the velocity jump is not higher. Other types of tokens based on Ethereum, known as ERC20 tokens, have significantly higher velocity. For example, a “wrapped” Ethereum-based version of BTC known as “wrapped BTC,” which creates a token backed by BTC that could be used in DeFi applications, has a velocity of over 25 vs ETH’s 12.

This underscores ETH’s mixed narrative: it is not purely a utility token, nor is it mainly a store of value.
Fees

With growing economic activity and scarce space within transaction blocks, fees increase. This is especially acute in Ethereum, given the rising popularity of and experimentation in decentralized applications.

Looking at the network fees in terms of native units (amounts paid in BTC and ETH), we can see the relative congestion issues in each.

Transaction Fees Can Surge With Congestion

Looking at average transaction fees in dollar terms, fee surges are even more problematic, as the U.S. dollar value of the assets in which fees are paid has surged. Average transaction fees in U.S. dollar terms for BTC are currently higher than those for ETH, but since ETH transactions are generally smaller, this is starting to crowd out some Ethereum activity.

Transaction Fees Can Get Problematic in Dollar Terms
Looking at the total transaction fees generated by a blockchain gives us an idea of the network’s “revenue.” From this chart we can see that the total value generated by those that maintain the Bitcoin and Ethereum blockchains, which can be taken as a measure of the network’s direct economic footprint. Note that this does not reflect the value riding on the blockchains; rather, it measures the income accruing to those doing the maintenance work, and can be considered the blockchain’s GDP.

### Public Blockchain GDP

- **BTC Total Fees (USD)**
- **ETH Total Fees (USD)**

![Graph showing the total fees generated by BTC and ETH over time](source: Coin Metrics)

### Key Statistics as of Feb. 25

<table>
<thead>
<tr>
<th>Metric</th>
<th>BTC</th>
<th>ETH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active addresses</td>
<td>1.22 million</td>
<td>619.0 thousand</td>
</tr>
<tr>
<td>Addresses with &gt; $1</td>
<td>31.71 million</td>
<td>36.43 million</td>
</tr>
<tr>
<td>Addresses with &gt; $10m</td>
<td>8040</td>
<td>1606</td>
</tr>
<tr>
<td>Daily transactions</td>
<td>328.85 thousand</td>
<td>1.23 million</td>
</tr>
<tr>
<td>Average tx fee in USD</td>
<td>$22.61</td>
<td>$15.89</td>
</tr>
<tr>
<td>Total tx fees in USD</td>
<td>$7.43 million</td>
<td>$19.59 million</td>
</tr>
</tbody>
</table>

*Source: Coin Metrics*
Crypto asset regulation is still a complicated topic for everyone affected, even 12 years in. And as more crypto assets appear, each with distinct use cases and histories, the situation is getting more complicated still. There is still no global agreement on how crypto assets should be regulated, who should do the regulating, or even what they are. Are they financial assets? Commodities? Property?

Regulators around the world have been grappling with this problem for some time, however, and are becoming better informed. President Biden has nominated cryptocurrency experts to the top posts at the two main securities regulators. Some members of the U.S. government have spoken publicly about Bitcoin’s potential. And some local officials are even promoting their regions as crypto-friendly destinations.

There is, nevertheless, still a risk that governments could impose onerous restrictions on crypto asset activity. India is preparing a bill that will ban the use of non-government-issued cryptocurrencies. Nigeria’s central bank is attempting to stamp out cryptocurrency trading.

And some investors believe that, if Bitcoin becomes too powerful, governments will retaliate harshly.

It can be argued that the more embedded Bitcoin becomes in the established financial system, and the more it is held in investment portfolios by private and corporate citizens, the less likely governments will have the stomach to attempt to repress a tool designed to financially empower users. It is wise, however, to bear all potential risks in mind.

When it comes to Ethereum, it is less likely that governments will fear its monetary competition, as its market size is still smaller and potential role as a store of value has not yet consolidated. Governments could go after Ethereum for its potential to support tax evasion, however. Most of the activity on dapps is as yet untraceable, and the ease of moving value around in a pseudonymous manner could be flagged as a threat to public revenue.

Payments

One aspect of crypto markets that is most likely to attract the attention of regulators is payments. Payments are one of the more regulated aspects of financial markets, as they not only represent economic activity and the movement of wealth, but are also the conduit for illegal activities.

The U.S. Financial Crimes Enforcement Network (FinCEN) has proposed a rule that will impose stringent data collection requirements on all crypto exchanges. The counterparty identification requirement has triggered some backlash as it would prevent the transfer of cryptocurrencies to smart contract wallets, impacting the growth and utility of the decentralized finance industry.
The proposed rule has drawn widespread industry backlash. It has also raised concerns about implications for Ethereum 2.0. In order to earn rewards on the new Ethereum network, users must send a minimum balance of 32 ETH to a smart contract which does not require any counterparty information other than a valid blockchain account address.

At the heart of the regulatory difficulty is the role of intermediaries in collecting identifying information for an industry built to circumvent the need for intermediaries.

This is also seen in discussions around the rules suggested by global anti-money laundering watchdog FATF, which has recommended that G-20 regulators graft the so-called Travel Rule requirements onto digital assets. This would require intermediaries such as crypto exchanges and payment platforms to share personally identifiable information about crypto transactions.

The pressing need to mitigate money laundering and terrorism financing will not go away, and could give rise to regulation that stunts the potential growth of bitcoin transactions and investment. On the other hand, regulatory clarity around cryptocurrency payments could end up solidifying bitcoin’s role as a currency, further cementing its legitimacy.

### Taxes

The fiscal situation of crypto assets in most jurisdictions is still unclear. When is tax payable on a crypto transaction? Part of the issue rests on what crypto assets such as bitcoin and ether are. Are they a currency? We don’t pay tax when we use fiat to buy a sandwich. Or are they a capital asset? If so, every transaction would require the calculation of capital gains.

For now, the IRS in the U.S. considers bitcoin and ether to be property, and expects capital gains to be declared upon “sale or other exchange,” which presumably includes the use of crypto assets to purchase goods or services, and activate smart contracts. (Note: this is not tax advice!)

As the economic activity on the networks grows, this question will become more pressing as governments worry about lost revenue and intent to evade taxes. It could even, as mentioned above, become a choke point should the authorities wish to dampen the blockchains’ success.

### Technological

The risk of a bug in the bitcoin software is low, given that its relatively simple structure has been working effectively for over 12 years.

The introduction of upgrades such as Taproot could add an element of technology risk in that they introduce new code to the protocol. But the transparency of the Bitcoin network makes bugs easy to catch, and the focus of the developer community will enable fast fixes should any problems arise. Furthermore, the slow roll-out of any Bitcoin change gives ample time for rigorous testing.
One of the main risks to Ethereum’s ambitious upgrade to a new proof-of-stake consensus protocol is a delay in the transition. The roadmap has already undergone several revisions and setbacks. Another significant one would have a negative impact on economic expectations of the network and potentially on ether’s value. There is also a non-zero probability of Ethereum 2.0 being cancelled altogether.

Also, the upgrade plan has undergone some modifications, with the addition of new complexities. These may result in bugs and unforeseen network vulnerabilities. This is one of the main reasons the new network will run in parallel to the original one for some time, to allow for real-world testing and troubleshooting. As new features are rolled out and the Eth 2.0 network stands the test of time, the technological risks to Ethereum will subside.

### 51% attack

A different type of technology risk is that of a 51% attack on the network, in which a hostile actor takes over enough mining power to be able to censor some transactions and possibly cancel some approved blocks.

An attack becomes increasingly expensive as the aggregate mining computing power increases - this is one of the reasons the industry celebrates an ever-higher hashrate index.

Given the current size and spread of the industry’s mining power, the cost of a hostile 51% attack on Bitcoin, and to a lesser extent on Ethereum, is prohibitively expensive, but could foreseeably be within reach of a state actor.

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**Growing Hash Rates Improve Network Security**

![Graph showing growing hash rates for Bitcoin (BTC) and Ethereum (ETH) over time.](image_url)
Such a move would be relatively obvious, however, and while confidence in the network would no doubt be temporarily dented, the community would most likely find the consensus for a workaround to boot out the attackers.

What’s more, the widening dispersion of mining power weakens the possibility that existing miners could be bribed to attack the network. According to the Cambridge Center for Alternative Finance, as of the middle of 2020, 35% of Bitcoin mining power was outside of China, up from 25% the previous year. Given the recent push to develop a Bitcoin mining industry in the U.S., that percentage is most likely even higher today.

When Ethereum migrates to Ethereum 2.0, its security will improve even further, as proof-of-stake disincentivizes a malicious attack by entrusting security to stakeholders. A stakeholder attempting to take over the network would not only have an increasingly expensive barrier as the network grows; the entity would also decimate the value of its own holdings.

Ethereum has undergone several meaningful changes to its functionality, such as adjusting the monetary policy (block rewards were reduced in 2017 and 2019) and shortening the time between blocks. In 2016, the Ethereum community went as far as deciding to undo a sequence of transactions in response to a large hack (this would be much harder to do today given the growth in the network, but with enough incentive, would not be impossible). Those who were against the idea stuck with the original chain, which became

### Malleability

Another risk to Ethereum, as well as one of its strengths, is the relative malleability of the underlying code compared to Bitcoin. While significant changes to the Bitcoin blockchain have been few and far between (the only other one comparable in impact to the upcoming Taproot upgrade was the implementation of SegWit in 2018, to enhance the transaction block capacity).
Ethereum Classic, and which was not able to overcome the security weaknesses inherent in smaller blockchains.

While we can assume that the community is incentivized to implement improvements that help the network, the technological uncertainty could act as a brake on the incorporation of Ethereum-based decentralized functions into traditional finance, which could impact the asset's outlook. It could also dissuade financial institutions from supporting ether in custody or trading services.

**Competitive**

Could Bitcoin be replaced by a more efficient, secure competitor?

It is possible, but increasingly unlikely. While it is true that in tech and in finance, the first is not always the one that succeeds, the size of Bitcoin's network is becoming an insurmountably high barrier.

In Bitcoin's case, the strength in the network is not just from the number of active addresses, which is at all-time highs. It is also from the number of participants in the network’s security: the miners. A competitor would have to convince the majority of Bitcoin's miners to switch their mining machines (possibly incurring significant capital expenditure) over to a different protocol, which they would only be incentivized to do if the bulk of transactions were on that protocol.

But transactions would only move to a different protocol if all features were an improvement, including the security - which is determined by the miners.

This balance between security and size of network, where one supports the growth of the other, is a resilient balance that ensures Bitcoin's position as the dominant secure payments network.

It is possible that many users will choose to sacrifice security for convenience, should regulations make Bitcoin more cumbersome to use. In this case, users could migrate to less secure and less private but faster and cheaper networks. There will always be a demand for security and monetary resilience, however. Bitcoin is unlikely to be the only cryptocurrency in active circulation going forward. But it’s position as the most secure will be extremely difficult to assail.

Ethereum is in a similar position. Its relatively high transaction fees are pushing some applications off onto rival blockchains, and these applications may see some volume move with them. Network effects matter, however, even if blockchain interconnectivity becomes seamless, if only because of the strength of the developer network and the sprawling web of complementary dapps.

Replicating Ethereum’s developer community and level of decentralization will be extremely difficult for newer blockchains. This does not mean that they won’t also do well - we may be heading into a scenario of multiple blockchains each with a unique functionality. And the technology’s open source ethos encourages innovation and iteration. The possibility of competition also acts as an incentive for Ethereum’s continued progress, and highlights the need to increase capacity in order to keep fees down.
CONCLUSION

In this report, we aimed to present Bitcoin and Ethereum through an investor’s lens. What’s more, we wanted to present them side by side, to help investors understand the main differences between the two.

Bitcoin and Ethereum are not in competition. They both have different reasons for existing, and while there may be increasing overlap in the future, we expect them to each occupy fundamental roles in the emerging financial landscape.

We have not attempted to place a target value on either asset - at the moment there are too many variables in play, both within the crypto industry and without, for that to be a useful exercise. What we hope is that the outlooks for each are now a bit more clear in investors’ minds - or at least, investors have a better understanding of the variables that can be part of an investment thesis. We also hope that readers now have a better understanding of the developments to keep an eye on. Crypto markets, and the assets that trade on them, are evolving rapidly; even as interested bystanders, investors will learn much about the evolution of new financial systems and the behavior of a new type of investor by watching them closely.

CoinDesk Research offers reports and multimedia programming by independent experts on crypto industry trends and assets, to help professional investors make sense of the rapidly evolving concepts and data.

You can see more of our work, as well as a wide range of reports from some of the industry’s top research teams, in our Research Hub at www.coindesk.com/research. Be sure to follow us on Twitter at @coindesldata.

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