As interest in Blockchain booms, Ethereum gains ground
Analysis and trends of investment in the blockchain sector

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Key takeaways

» Given institutional and corporate enterprise attention, interest in blockchain technology has never been greater. As a result, Bitcoin and Ethereum’s dollar prices are up 44% and nearly 1,000% respectively, YTD, at time of publish.

» Bitcoin remains a trusted store of value, even as the developer community takes a hard look at its perceived flaws.

» Ethereum is quickly evolving into the primary focus for enterprises looking to code business logic into the blockchain.

» Even so, VC investors have tapered their participation in deals in blockchain companies as alternative forms of fundraising at the company and fund level emerge such as initial coin offerings (ICOs) offering specialized tokens, and VC-backed crypto hedge funds.

A lot has happened since we released the PitchBook Fintech Analyst Report: Bitcoin/Blockchain last fall. This analyst note provides an update on the blockchain subsector of fintech, and goes in-depth where we see specific opportunities and substantial investor interest. For background on the topic, this previous report provides a primer on the history of blockchain and how the technology works. The plateauing venture capital investment figures undersell the continued growth and broader acceptance of the technology. Investor interest in direct-protocol investment has never been greater. As of May 2, one unit of Bitcoin now costs $1,473 and one unit of Ether—the cryptocurrency powering the Ethereum protocol—costs $78. This represents price increases of 44% and nearly 1,000% respectively YTD. Furthermore, high-profile institutions have partnered to explore the technology. Most notably, the Enterprise Ethereum Alliance’s formation in late February bodes well for the future of the technology and for developing a standard enabling a wide range of applications.
Private Investment

Venture capital investments into blockchain-based applications have waned since peaking at 74 deals accounting for $236 million in capital invested in 1Q 2015. There is limited opportunity to challenge early movers into the wallet and payment space given high regulatory barriers to entry in the developed world. Thus, many investments have been made through other means. Of the traditional venture capital deals into blockchain startups in 2017, just 39% have been to bitcoin-related companies, down from 91% in 2013. This figure should only decrease as other blockchains gain traction and protocols develop for wider use cases beyond the facilitation of payments and the management of digital assets. Furthermore, the development of internal working groups and external partnerships mean much of the spend on blockchain development remain hidden in undisclosed corporate budgets.

VC blockchain investment activity by year

The current economics of cryptocurrency investment have instead focused capital to flow into the protocols themselves. Since the last time—until this January—that the Bitcoin unit price eclipsed $1,000, the Bitcoin market cap has increased to $24 billion from a 2013 then-peak of $11.8 billion. Ethereum’s market cap now stands around $7 billion as the price has rallied to briefly eclipse $80 in recent days after starting off 2017 in the single digits.

Cryptocurrencies have the potential to replace certain types of venture funding as tokens can be constructed to enable a more liquid version of crowdfunding. Blockchain Capital recently raised a $50 million fund, with $10 million coming from BCAP digital tokens, to be issued this month. This model for a VC fund uses the established Initial Coin Offering (ICO) model used by many cryptocurrency projects.
According to research firm Smith & Crown, ICO crowdsales have raised $270 million cumulatively through November 2016. While these opportunities offer few protections to the investor other than what’s baked into the protocol, the payoff can be huge. The market cap figures of the most popular cryptocurrencies rival those of high-profile unicorns. Like traditional equity investments, owners of the cryptocurrency typically have a say in how these platforms develop through forking and other mechanisms that can be coded into the protocol. Even so, for every Ethereum-sized crowdfunded success, there are 100 failed cryptocurrency projects. Thus, the same lax rules which make it easy for companies to raise capital this way, give few protections to individual investors.
Bitcoin

Developers wrestle with how to effectively scale the network amidst continued growth.

Bitcoin has faced challenges as it continues to scale. Recently, Bitcoin has continued to witness debate over its ideal form as either a means of exchange or as a store of value. With the current specs of the Bitcoin blockchain and transactional load, the 1mb block size only allows for three transactions per second. This has real-world consequences for merchants and consumers, preventing them from instantaneously transacting value as one block is mined only every 10 minutes, and transactions may get backed up even further.

The Core Dev, the closest thing to leadership in the decentralized Bitcoin ecosystem, wants to limit transactions to the current bandwidth. This preserves Bitcoin’s relative anonymity and status as a form of digital gold. Bitcoin’s function as a store of value has been cited as the primary price driver for both Chinese capital flight and excitement over a potential Bitcoin ETF. These two factors among others have resulted in a price run-up to once again exceed $1,000 for the first time since late 2013. An increased block size would allow for many more transactions, but would in turn require more computing power. This would likely lead to greater centralization given the economies of scale of Bitcoin mining. A larger block size would give greater comparative advantage to large mining pools with greater resources. The fear over centralization is that any changes in the ledger are contingent on acceptance by a majority of nodes. If any one entity controlled an outright majority of nodes or close to it, there would be potential for foul play, or an equally damaging loss of faith in the system.

Critics argue that the role of the Core Dev already represents centralization in the system. A proposed hard fork called Bitcoin Unlimited would remove the hard cap on block size entirely, allowing miners to coordinate the block size under an “emergent consensus.” This would greatly increase the transactional capacity of the network, and represent a permanent solution to the issue. For security and centralization concerns, a more short-term compromise solution would be the soft-fork segregated witness protocol. Segregated witness would double the effective block size and network capacity, offer certain security upgrades, and facilitate future changes. However this would only be a temporary solution, likely requiring continued upgrades in the future.
Ethereum

The network has recovered from 2016’s hacks as ambitious new features are in development.

Ethereum has been the most exciting platform for development in the blockchain space since Bitcoin. The protocol’s turing-complete nature allows for the application of core business logic into contracts. Bitcoin and copycat blockchains are primarily transactional with few other features. Ethereum’s creator Vitalik Buterin has laid out an ambitious plan for 2017, adding a range of features and upgrades.

Ethereum’s increased endorsement by various high-profile enterprises is in part enabled by the promise to enable Ethereum abstraction. This will allow a customizable level of security as custom consensus systems can be swapped out for the main consensus chain at the enterprise level, enabling secure applications. Finally, Ethereum will implement what’s called zk SNARKS or “zero-knowledge Succinct Non-interactive Argument of Knowledge” which allow for execution of transactions without any knowledge of transaction details, an upgrade in anonymity from Bitcoin.

All of these features will be enabled by the transition from proof of work to proof of stake. Proof of work was one of the major concepts refined by Satoshi Nakamoto in his 2008 Bitcoin whitepaper. The system rewarded “miners” for completing cryptographic problems used to conduct transactions. Ethereum’s forthcoming CASPER proof of stake system will instead rely on transaction fees. Those who wish to validate transactions must pay an upfront deposit that could be forfeited if they use their position to compromise the network.
Institutional Involvement

Enterprises and institutions begin to shift allegiances as winner and loser consortiums emerge.

Apart from the lofty growth of digital currency prices, institutional interest and investment into blockchain development has been a major source of validation for the technology. The likes of IBM and Intel and others have backed the Linux Foundation’s Hyperledger project first announced in December 2015 to support open-source blockchain projects. Furthermore, the banking and technology consortium formed around blockchain startup R3 in September 2015 is currently trying to raise $150 million in equity capital from its constituents, revised down from a previous target of $200 million. R3 has faced hurdles as perhaps its highest-profile affiliates Goldman Sachs and JP Morgan have announced their withdrawal from the project. Furthermore, reports have surfaced that the company’s flagship R3 Corda technology does not utilize the blockchain. The industry responded with scorn when this was announced in a recent presentation.

Ethereum stands as the most promising platform for diverse business use cases. This comes in spite of last year’s hack of The DAO (distributed autonomous organization), an Ethereum-based smart contract formed to support Ethereum projects. The diverse membership of the Enterprise Ethereum Alliance supports this, and this will be the consortium to watch going forward particularly as updates continue to roll out.

Conclusion

Consumer-facing applications are just around the corner. Currently, the technology is being developed to be able to run Ethereum-based smart contracts without downloading the entire Ethereum blockchain. Additionally, Ethereum-based smart contracts will no longer need to be externally funded as the funding mechanism can be programmed in. While the debate around the Bitcoin block size rages on, the cryptocurrency itself remains popular amongst speculators and as a hedge against geopolitical instability. While the Winklevoss twins’ proposal for a Bitcoin ETF had a recent setback, further attempts to facilitate main street investment into the space will continue. Barry Silbert’s Grayscale Capital recently launched the Ethereum Classic Trust, a vehicle for accredited investors to invest in Ethereum Classic for a 3% annual fee. The company has overseen a similar Bitcoin vehicle since 2013. More promisingly, the US SEC is currently gathering commentary and opinions in order to consider approval of an Ethereum ETF. The combination of developer interest and increased ease of investment will only drive prices higher, so long as the community avoids further hacks and scandals.
### Select Company Profiles

**BitFury**  
**Location:** Amsterdam, The Netherlands  
**Year Founded:** 2011  
**Capital Raised to Date:** $90M  
**First Funding Date:** May 2014  
**First Funding Amount:** $20M  
**Latest Funding Date:** January 2017  
**Latest Funding Amount:** $30M  
**Latest Funding Post-Valuation:** N/A  

**Description:** BitFury builds hardware and software solutions for enterprises, governments and individuals to conduct blockchain-based asset transfers. Founded in 2011, the company has raised $90 million in capital from Blockchain Capital, Credit China Holdings, QueensBridge Venture Partners and others. The government of the Republic of Georgia has partnered with BitFury to develop a blockchain-powered land registry, the first of its kind.

**Factom**  
**Location:** Austin, TX  
**Year Founded:** 2014  
**Capital Raised to Date:** $9.93M  
**First Funding Date:** September 2015  
**First Funding Amount:** $1.9M  
**Latest Funding Date:** April 2017  
**Latest Funding Amount:** $8.03M  
**Latest Funding Post-Valuation:** N/A  

**Description:** Factom provides data-layer technology that functions as a Blockchain as a Service (BaaS). The company’s platform secures data for private and public organizations by publishing encrypted data or a cryptographically unique fingerprint of the data to Factom’s blockchain. The company describes itself as a verification and validation layer for applications such as mortgage histories or financial data, and can help these systems rebuild after a failure.

**Chain**  
**Location:** San Francisco, CA  
**Year Founded:** 2013  
**Capital Raised to Date:** $43.9M  
**First Funding Date:** March 2013  
**First Funding Amount:** $4.4M  
**Latest Funding Date:** September 2015  
**Latest Funding Amount:** $30M  
**Latest Funding Post-Valuation:** $130M  

**Description:** Chain is a technology company that partners with enterprise clients to build, deploy and operate custom blockchain networks that power the delivery of financial products and services. Recently, the company partnered with Visa to create Visa B2B Connect, a platform for global B2B payments using the company’s Chain Core blockchain infrastructure product. The company has raised $43.9 million from 30 investors including NASDAQ, Visa Ventures, RRE Ventures and Khosla Ventures, among others.